

# COMMERCE

M A G A Z I N E

**Danger: Enemies from Within . . .**

**Our Missing Vice Presidents . . .**

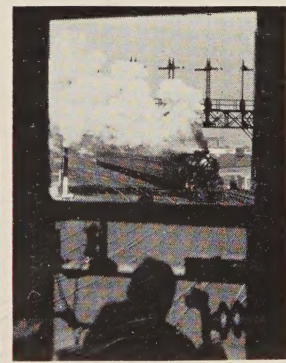
**Concrete Progress . . . . .**

**How Much Mobilization? . . . . .**

**Chicago Mobilizes Against Atom . .**

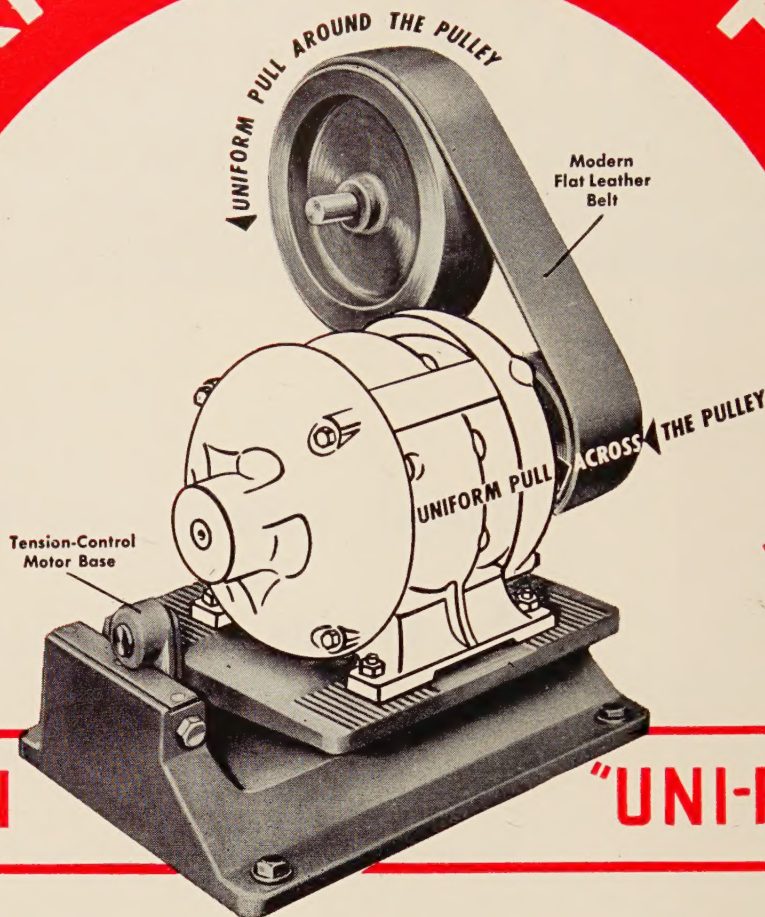
**SEPTEMBER, 1950**

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## STATISTICS OF

## CHICAGO BUSINESS

	July, 1950	June 1950	July 1949
Building permits .....	1,248	1,240	1,140
Cost .....	\$29,693,100	\$29,582,800	\$28,447,000
Contracts awarded on building projects, Cook Co. ....	1,871	2,291	1,140
Cost .....	\$51,035,000	\$67,529,000	\$36,895,000
(F. W. Dodge Corp.)			
Real estate transfers .....	7,226	8,061	5,140
Consideration .....	\$6,277,716	\$6,497,697	\$4,973,200
Department store sales index .....	206.3*	220.5	160.0
(Federal Reserve Board)			
(Daily average 1935-39=100)			
Bank clearings .....	\$3,329,414,045	\$3,564,911,479	\$2,863,181,000
Bank debits to individual accounts:			
7th Federal Reserve District .....	\$16,640,665,000	\$18,287,710,000	\$14,617,914,000
Chicago only .....	\$8,058,309,000	\$9,151,225,000	\$7,529,508,000
(Federal Reserve Board)			
Railway express shipments, Chicago area .....	869,683	1,041,888	1,010,200
Air express shipments, Chicago area .....	48,649	59,623	41,500
L.C.L. merchandise cars .....	19,458	21,565	22,500
Electric power production, kwh. ....	997,874,000	1,039,506,000	924,668,000
Revenue passengers carried by Chicago Transit Authority lines:			
Surface division .....	49,464,474	53,567,507	56,358,200
Rapid Transit division .....	11,057,526	12,128,456	12,487,200
Postal receipts .....	\$7,847,319	\$9,336,459	\$7,572,000
Air passengers:			
Arrivals .....	157,465	172,124	134,100
Departures .....	165,752	178,641	140,400
Consumers' Price Index (1935-39=100) ..	179.2	176.4	173.0
Livestock slaughtered under federal inspection .....	398,176	454,918	403,100
Families on relief rolls:			
Cook County .....	29,027	29,642	25,500
Other Illinois counties .....	18,281	19,003	17,900

\*Preliminary figure.

## OCTOBER, 1950, TAX CALENDAR

Date	Due	Tax	Returnable to
15	If total O. A. B. taxes (employer and employee) plus income tax withheld in previous month exceeds \$100, pay amount to	or remittance may be made at end of month with quarterly return directly to	Authorized Depositary
15	Illinois Retailers' Occupation Tax return and payment for month of September		Collector of Internal Revenue
31	Illinois Unemployment Compensation contribution report and payment for third quarter of 1950 (UC-3 and UC-40)		Director, Department of Labor
31	Fourth quarterly installment on 1949 Federal Unemployment Compensation Tax		Collector of Internal Revenue
31	Federal Excise Tax return and payment due for September, 1950		Collector of Internal Revenue



# COMMERCE

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## In This Issue . . .

Four articles in this month's COMMERCE are more or less directly related to the war in Asia. The first article, by Betty Savesky (p. 13), reviews the critical problem of plant security in time of war. The research work which preceded the writing of this report was not easy, for much is still to be developed on plant security measures adequate for a war against communism. However, Miss Savesky talked with a number of civilian defense authorities, plant officials and personnel of the FBI. One point that is clear: the responsibility for internal plant security rests directly on the shoulders of plant management.

Jeff Rooks, a promising young writer, appears for the first time in COMMERCE with a report (p. 15) on Chicago's forthcoming mock atomic bombing. Mr. Rooks' investigation into this unpleasant subject has been extensive. His initial report ran many times the length of regular articles in this magazine, but he boiled this material into a brief, factual survey of atom defense preparation for the nation's leading manufacturing center.

One of the most immediate problems that has confronted management as a result of the Korean war has been the recall of military reservists, many of whom hold important executive positions in industry. Dr. Burleigh B. Gardner, executive director of Social Research, Inc., suggests steps for coping with this critical problem in an article beginning on page 17.

COMMERCE Washington correspondent Jack Robins takes up the question of how much mobilization will be required by the Korean War in an article beginning on page 19. Mr. Robins is quick to concede that circumstances involving worldwide danger spots may change abruptly, but on the basis of current planning indications are that we confront something like six per cent mobilization — as compared with about 35 per cent mobilization during World War II.



# FACTS

about

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## DID YOU KNOW THAT . . .

- Roosevelt's enrollment jumped from 1,200 students in 1945 to over 5,500 this year.
- Roosevelt students ranked in the top 25% of all students taking the Association of American Medical College admission tests recently.
- The highest ranking student in the examination for the Master's Degree in Mathematics at a great neighboring university last year was a Roosevelt graduate.
- In five years Roosevelt College has become one of the largest fully accredited, privately financed liberal arts colleges in America.
- Recent ratings by North Central Association rank Roosevelt's faculty in the top third in Doctor's Degrees, top 15% in graduate training.
- Numbered among Roosevelt's faculty are businessmen and scientists from some of Chicago's largest industries.



THE story of the growth and accomplishments of Roosevelt College is one of vital interest to all businessmen. As education becomes more and more important in our way of life, the role Roosevelt College plays in this community takes on new values.

It is very probable that many employees in your office or plant are now taking courses at Roosevelt. And, for the many who will seek your advice concerning college training, it is important that you know the background and advantages of Chicago's unique lake front college.

It would be wise for you to have complete literature on the courses and activities of Roosevelt for distribution to your employees. Our "round-the-clock" schedule permits students to work and acquire an education with maximum convenience. Write us today.

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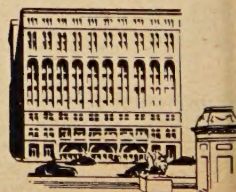
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# The Editor's Page

## Wanted—3 Million Workers

SINCE the outbreak of war in Korea a great deal has been said and written about the effect the big increase in military demands will have on the availability of raw materials for civilian production. Much less consideration seems to have been given to the long range problem of manpower, which promises to become fully as critical as shortages in some of the most strategic raw materials.

Just before the start of shooting in Korea completely changed the nation's defense thinking, employment was at an all-time peak approaching 62,000,000. Allowing for the normal number moving between jobs, unemployment totalling about 3,500,000 was considered to be close to the irreducible minimum. Now it is estimated that some 3,000,000 more civilian workers will have to be found at the same time Uncle Sam is stepping up the military force by a million persons or more.

For the moment it may be possible to draw enough workers from the diminishing pool of unemployed. Over the longer range, however, the total work force will have to be expanded, as it was during World War I, by attracting housewives, drawing back people from retirement and utilizing marginal employables.

The initial burden of this situation is going to fall on the personnel departments. Somewhat later, production departments are going to have their problems too. Personnel people face the biggest recruiting and training job they have had in five years or more. Production departments, which have generally made such good progress in the last two years in boosting productivity, will have a hard battle to maintain their gain using inexperienced and marginal workers.

These problems will not be easily solved. They will have to be, however, if the maximum in civilian production is to be achieved.

## Those Golden School Days?

SOMEWHERE in the neighborhood of two million youngsters will begin partaking of a high school or a college education this month. To older eyes, they seem like a pretty lucky bunch of kids. They are on the threshold, so it would appear, of four of the jolliest years of their lifetimes. "Dear Old Golden School Days," as the song goes.

Well, all things considered, we don't envy these young folks. Beginning a high school or college education at this uncertain stage of history, they could well use the combined wisdom of Solomon and several Bernard Baruchs. The same thing could, of course, have been said of young scholars in 1930 or 1940. But, somehow, the job of looking ahead seems harder than ever these days. The problem of an interrupted edu-

cation is back again. The young man entering a university this Fall can only hope that the world behaves itself long enough for him to establish his claim to a sheepskin.

Assuming he does scrape through his "golden school days" without the military finger beckoning him, there is the further problem of landing a job four or eight years hence. Who among our wisest prophets can offer a reasonable estimate of the employment market for bright young graduates a half decade or so hence? Will it be a peacetime labor market, semi-war or total war?

Another thing our university scholar can ponder during his golden hours is the harsh fact that jobs for college-trained youths are becoming relatively scarcer. Last June (before Korea, that is) surveys indicated there were three law graduates for every job, five engineering graduates for every three jobs, and considerably more new chemists, personnel workers and accountants than industry had any hope of absorbing with any rapidity.

We have fallen into the unfortunate habit of providing our young people with learned occupational advice *after* they have completed their formal education. Every June there is an outpouring of articles and advice pointing the way to successful job-hunting and cataloging the poor, medium and best fields of employment. We could provide a more valuable service to these young people (and certainly to industry, as well) by giving them this advice before they have spent four years studying for a profession in which the chances of landing a promising job after graduation are none too good.

International headaches make prophecy far more hazardous than ordinary at the moment. When war clouds are not threatening, however, good "guesstimates" on employment trends often are possible.

## Dollar Shortage?

JUNE brought highly encouraging signs that the much talked of dollar shortage might be approaching an end. In that month U. S. exports exceeded imports by only \$190,000,000. Invisible items such as American tourist spending may have closed this gap entirely.

Sterling bloc countries, including Britain, were among the principal beneficiaries of our import increase. If this trend continues it should presage the end of dollar loans and grants.

Foreign trade figures for months later than June will be necessary to appraise the effect of the Korean war on foreign trade. Since the war increases our import needs and reduces our export ability it would be logical to expect the dollar gap to be further narrowed.

*Alan Sturdy*



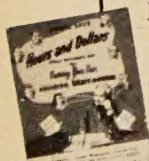
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# HERE-THERE and EVERYWHERE

• **Atomic Tumor Sleuth**—With this and other publications devoting extensive space to the destructive potential of atomic energy, it is refreshing to discover the humanitarian possibilities of nuclear fission are still being developed despite shooting war. Just recently, a new marvel of the atomic age, a weird looking chromium mechanism with flashing lights and electronic brains called an "Isotron", was completed under the guidance of Northwestern Medical School doctors. The Isotron is the most effective device yet created for pinpointing brain tumors. Instead of having his skull cut open, a suspected victim is given an injection of a radioactive isotope. The latter sends out "tracer" messages which are picked up at 32 spots on the head by two Geiger counter arms of the Isotron. Definite diagnosis is thus made possible with no discomfort whatsoever.

• **Modern Kitchen Snooper**—"Black light", that eerie but appealing illumination used with fluorescent murals on the walls of modern theaters, is being turned into a super-detective on culinary cleanliness. General Electric reports that the New York City health department is experimentally using black light to inspect cooking utensils, dinnerware, milk containers and other kitchen equipment. The reason is that when a pot or pan is treated with a special fluorescent dye, the tiniest particle of unre-moved food will absorb the dye and reveal itself under the black light.

• **Skinny Steel** — Armco Steel Corporation recently shipped a highly important steel order by first class mail . . . in an aspirin box. The order consisted of four test coils made of steel ribbon one-4000ths of an inch thick, or about one-

tenth the thickness of a human hair. The thin steel, required for Navy high-frequency electronic equipment, is an alloy that elongated 400 times in a tiny rolling mill especially built to reduce two-inch strips from a thickness of about .006 of an inch to .00025 of an inch.

• **Iron Ore Reserves** — The American Iron and Steel Institute reports that the United States has access to an estimated iron ore reserve of 8,096,000,000 gross tons including deposits as far away as Brazil, Venezuela and Labrador. Estimated ore reserves available to Russia amount to 6,060,000,000 gross tons and include only those deposits behind the iron curtain. The institute notes — in the interest of complete clarity — that the iron curtain, itself, is not included among Russia's iron ore reserves.

• **Unique Guarantee** — The Elgin National Watch Company now guarantees buyers of its watches that the mainspring will never break. The unusual guarantee follows three years experience with the company's "durapower" spring developed from an eight-metal alloy after 12 years of research in cooperation with Battelle Memorial Institute. Some 4,500,000 of the new rust-proof, non-magnetic springs have been installed in watches since 1947 and, according to Elgin, "their performance has been nearly perfect."

• **Highway Hazard Passing**—Hitchhiking, reports the National Highway Users Conference, is rapidly becoming a thing of the past thanks to the adoption of anti-hitchhiking laws throughout the country. Exactly half the states have passed laws forbidding the solicitation of rides, and Washing-

(Continued on page 43)



## What do telephone capitalists look like?

---

### 23,000 Illinois Bell Employees are buying a part of the business

*They share the risks, the benefits, the pride of business ownership. It could happen only in America.*

Is it surprising that telephone capitalists include telephone *employees*, too? These three are typical. They are among 23,000 Illinois Bell employees who have bought or are buying over a quarter million shares of stock in the Bell Telephone System.

They are part owners of the business—capitalists who invest a portion of their earnings in stock purchases through regular payroll deductions. The capital they provide pays for the buildings, cables and other telephone tools that improve and expand your service, and build new job opportunities.

These telephone stockholders now have a stake in serving you that goes beyond the skill and experience that day after day they apply to their jobs. Now they share in the responsibilities and satisfactions, the risks and rewards of ownership. Only in America are such things possible.



Antoinette Moran is an operator in a Chicago exchange.



Samuel Merchant runs an elevator in a Chicago telephone building.

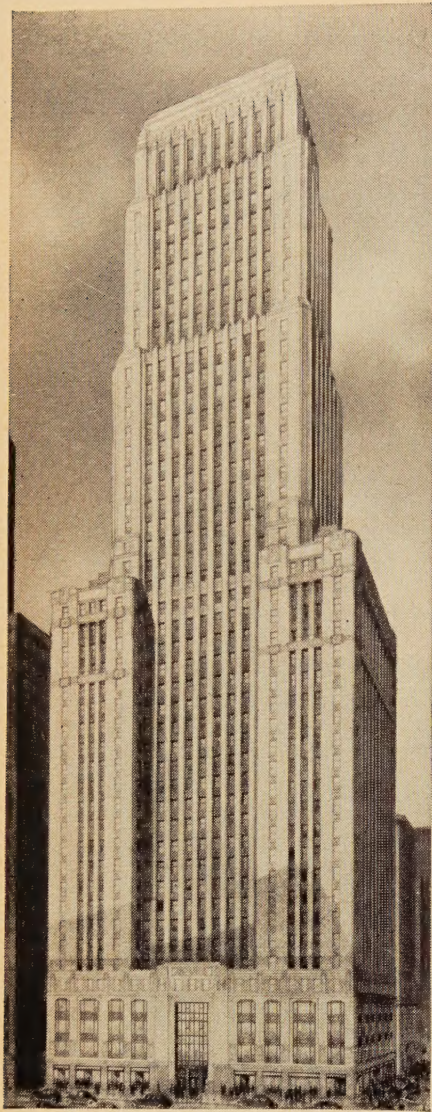


Charles Peters splices cable in the Joliet district.



**ILLINOIS BELL TELEPHONE COMPANY**





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## Trends in FINANCE and BUSINESS

### First-Half Dividends Over \$2 Billions

For the first time in history first-half dividends on common stocks listed on the New York Stock Exchange edged above the \$2 billion mark this year. The high level of business during the six months period is reflected in the fact that of 853 stocks to make payments, 29 per cent paid more than in the same 1949 period. On more than 57 per cent of the listed issues disbursements were the same as last year, 12 per cent reduced dividend payments, and the rest either deferred or suspended payments.

The exchange's earnings survey shows that of 1,024 listed common stocks, about 84 per cent paid dividends in the first half of 1950. Some highlights of dividend action by industries were: Construction companies which showed a 6.3 per cent rise in payments in 1949 gained five per cent this year; automobile company dividends, which rose 42.6 per cent in 1949, advanced 15 per cent this year; electrical equipment companies increased payments more than 46 per cent over the previous year, against a rise of 13.6 per cent in 1949.

Public utility concerns reported dividends aggregating \$325,763,000 in the first half of 1950, exceeding by a wide margin the payments of any other industry group. Eighty-one of the 90 listed utilities paid dividends, 36 distributing more than in the same 1949 period and none paying less.

### Brokers Paid Top Industry- Wide Salaries

The federal government recently completed work on a bundle of statistics relating to total national income in 1949. Among many other things, this huge

collection of figures disclosed that on an industry-wide basis, the brokerage business is now the highest paid enterprise in the country. The average person working for securities or commodity brokerage houses and exchanges earned exactly \$5,065 in 1949. Back in 1942 the same person working in the same business was earning \$3,073.

The next highest-paying industries, in order, were radio broadcasting and television, where the average annual earnings per full-time employe in 1949 were \$4,465 against \$2,667 in 1942; petroleum and coal products (average 1949 earnings: \$4,179 against \$2,410 in 1942); pipeline transportation (\$4,172 in 1949 against \$2,280 in 1942); and water transportation (\$4,137 in 1949 against \$2,729 in 1942). These five industries were the only ones in which average 1949 earnings exceeded \$4,000.

In the vast majority of industries earnings ranged between \$2,000 and \$4,000 last year. The five constituting the lowest-paid category were: farm workers (\$1,341), agricultural and service establishments workers (\$1,287), hotel workers (\$1,950), domestic workers (\$1,409), and medical and other health service workers, averaged \$1,991. The industry which increased its average earnings the most between 1942 and 1949 was forestry, up from \$727 to \$2,000.

» » « «

### Nation's Sweet Tooth Getting Sweeter

The average American citizen consumed 17 pounds of candy last year, reports Chicago candy maker Edwin J. Brach, who has discovered in a survey that the nation's per capita consumption of sweets now exceeds

(Continued on page 39)



# Walk From Work to College



## Invest Your Evenings in Advancement

The downtown Colleges of DePaul University offer a broad range of late afternoon, evening, and Saturday courses on the undergraduate and graduate levels to help you prepare for a more successful future in your chosen field. Conveniently located in the downtown DePaul Building between Wabash and Michigan Avenues at 64 East Lake Street, the downtown Colleges have attracted thousands of men and women eager to prepare themselves for advancement.

### COLLEGE OF COMMERCE

The Evening College of Commerce presents unlimited opportunities for those who wish to begin or continue their college training in the business fields. Courses on the undergraduate and graduate levels are offered this fall in the following general areas:

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Physics, Polish, Political Science, Religion, Social Science, Sociology, Spanish and Zoology.

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# Danger: Enemies From Within!

By Betty Savesky

The Korean War Has Made Internal Plant Security A  
Matter Of Current and Vital Importance To Industry

**W**AR in Asia has again presented industry with the extremely difficult task of protecting its vital facilities against the possibility of sabotage. The problem is admittedly serious, but precisely how serious it is difficult to say. At worst, it may constitute the most sinister danger that confronts the nation.

FBI Director J. Edgar Hoover said recently, "The Communists possess a well-knit, closely disciplined destructive force of approximately 55,000 members in the United States." Their strength and latent danger, he added, cannot actually be measured, for outright Communists are augmented by uncounted numbers of fellow travelers and leftist sympathizers.

## Thousands of "Commies"

Another security specialist, Frank V. Martinek, assistant vice president of Standard Oil Company of Indiana and a former government agent, puts it this way: "There are thousands of A-bombs walking around this country in the persons of Communists."

In a matter of weeks, wartime plant protection has thus become

a matter of crucial importance. Many key industries have already reinstated World War II security measures and, in addition, are considering the need for still further protection to meet the threat of today's undefined international crisis. As an initial step to cope with the problems of plant protection, as distinguished from the broader phases of civil defense, a Chicago committee comprised of representatives from the gas, power and telephone companies as well as the oil, steel and meat packing industries has been formed. Its membership will be broadened as defense planning progresses. It is headed by W. L. Furbershaw, Carnegie-Illinois Steel Corporation consultant and wartime military intelligence director for the Sixth Service Command. It is this committee's specific job to provide industry with a two-fold plan of self-defense, involving: One, security, meaning preventive action to avoid property damage and production delays by spies and saboteurs; and, two, restoration. The latter requires emergency planning to cope with successful sabotage: fire-fighting, rescue, evacuation, first aid and the resumption of facilities to normal or near normal operation in the shortest possible time.

All this planning is based on the idea that primary responsibility in the field of plant protection rests with company management. However, as military contracts are let, the procuring agencies will, of course, acquire a special interest in a plant's security set-up.

## World War II Procedure

During World War II employees working on classified war contracts had to be cleared by the procuring military agency. When a company received a classified contract, each employee had to be fingerprinted and his background checked for loyalty. Employees also had to be cleared by the military in government-owned plants which were run by private management.

Nevertheless, since each plant is an individual security problem, responsibility for its protection falls directly upon the shoulders of its top management. As a guide for industry, the government plans to issue a plant protection manual via local defense committees. At the moment, there is next to nothing in the way of official documents to help with the problem.

In the early stages of the last war, the FBI issued a comprehensive booklet entitled "Suggestions for Protection of Industrial Facili-

← Current planning is based on the idea that primary responsibility for plant protection rests with management.



ties." This brochure described various sabotage techniques, the use of identification methods and badges for plant employees, fencing, proper lighting, finger printing and numerous other details of security. This guide is no longer available, since government responsibility in the area of industrial protection has been shifted to the War Munitions Board.

### FBI Is Contact

The FBI is still, however, the agency to be contacted on matters involving possible sabotage. The FBI has asked employers who have evidence that a worker is engaging in espionage or subversive activities to report such information to the nearest FBI office. But, as FBI Chief Hoover cautions, "The FBI is interested in receiving facts. We are not interested in what a person thinks but in what he does which undermines our internal security. Avoid reporting malicious gossip or idle rumors."

Mr. Hoover further warns, "Once you have reported your information to the FBI, do not endeavor to make private investigations. This can best be done by trained investigators who have access to data acquired over the years on individuals engaged in subversive activities."

The FBI does not make the results of its worker investigations known to employers, nor can it take action until an illegal act has been committed. It may, however, plant its own men in a factory to observe known or suspected subversives.

Security experts believe there are two ways by which management can do the most good. To prevent subversives from getting on the payroll in the first place, it can make job questionnaires thoroughly complete. Application forms can root out a man's nationality, his social, educational and vocational background as well as information about his family.

Furthermore, the experts believe one of the best ways to ferret out the potential saboteur is to enlist the aid of his fellow workmen. On bulletin boards, in company publications and in group meetings with supervisors, management can emphasize that it is the duty of every employe to report instances of

suspected sabotage or subversion, even when it may appear of minor consequence.

Standard Oil's security chief, Frank Martinek goes even further. Employees, he declares, can be industry's best line of protection if they are properly sold on their security role. Employees should be warned against mechanical and psychological sabotage, he adds, and urged to be vigilant against both.

He further recommends that employees be given a chance to renounce any former Communist ties. Many loyal Americans, he believes, have inadvertently or unconsciously become Communist sympathizers by accepting dishonest but well sounding tenets of the Communist philosophy.

Several civil defense plans have been submitted to President Truman in the past few years, none of which were accepted. However, an interim manual on civil defense will be released early this month by the National Security Resources Board. Meanwhile, one of the documents used as a tentative guide by the Chicago Civil Defense Committee is the Hopley Report drawn up by the Office of Civil Defense when James Forrestal was Secretary of Defense. The new NSRB manual will probably incorporate many policies on plant protection that were contained in this report.

### Objectives

The objective of plant protection, as defined by the Hopley report, is "to secure all facilities against any enemy action, against the acts of enemy sympathizers, sabotage, accidental disasters caused by war conditions and natural disasters, the effect of which is aggravated in wartime by the lack or displacement of the personnel of peacetime protective agencies."

Protection, the report stresses, must extend as far as possible from raw materials, through transportation, manufacturing, assembly points and ultimate delivery to the Armed Forces or wherever needed.

Under the Hopley Plan, each plant would have a "defense coordinator" who would maintain liaison with civil authorities and also be responsible for leadership in plant protection. Emergency plant protection programs, the re-

port suggests, should not replace any phase of the routine plant protection work which may have to be increased to meet wartime conditions.

The defense coordinator with his staff would train various plant personnel in fire fighting, first aid, radiological defense, rescue, evacuation and emergency communications. This top security man would have a protected room from which he could maintain outside telephone and radio communications with the local defense center.

### Thirteen Point Program

More specific, perhaps, is the 13-point plan of protective action for any plant regardless of size drawn up by Mr. Martinek. Under this plan, management would take these steps:

1. Create a clearing house for gathering information on espionage, sabotage and subversive activities within your organization. This would be placed in charge of a person trained as an investigator or enforcement officer.

2. Know your vulnerable points that need security protection, and place your most trusted employees in these spots. Appoint protection and security officers in each important unit where secret or classified government work is under way.

3. Make a study of non-tamperable identification badges and cards. Check guards frequently to make sure they are carefully identifying badge photos with the wearer.

4. Take appropriate precautions to protect vital documents, maps, drawings and formulae. Safeguard them in a secret place and give someone the responsibility of removing them to safety in case of emergency.

5. Survey fences surrounding vital installations to make sure they are as nearly impregnable as possible.

6. Select guards who are trustworthy. Study facilities to see that guards are spotted for maximum coverage; organize guard patrols and floodlight facilities at night to avoid dark corners.

7. Examine your communications system, telephone and intra-plant

(Continued on page 42)





Chicago Aerial Survey

Civilians in the "Warm War" . . .

## CHICAGO MOBILIZES FOR ATOM DEFENSE

By JEFF ROOKS

**W**HAT would happen if an atom bomb struck Chicago tonight?

Short of actual experience, the best theoretical answers to this question will be provided this month when the nation's third, and biggest, atomic attack test will be conducted in Chicago. Civil defense preparations, hastily accelerated since the Korean crisis, have already

been tested upon a smaller scale in Washington, D. C., and Seattle, Wash., but Chicago's mock attack, scheduled during the week of September 25-29, will be the most ambitious effort yet staged to prepare an industrial metropolis for the grim realities of an atomic bomb disaster.

Among the most interested observers of the test will be represen-

tatives of the National Security Resources Board, the nation's top civil defense planning agency, who afterwards will incorporate the Chicago findings into a civil defense guide book for use throughout the nation.

### Urgent Planning

The September test will be conducted against a curious background. Three months ago there was virtually no civil defense planning whatever for an atomic attack against Chicago. Few, if any, of the city's residents had even the vaguest idea of what to do in the event of an attack. Today, however, the city's civilian defense organization can give a creditable estimate of the number of safety pins required by emergency workers to bandage an explosion victim. By the end of September, any Chicagooan who can read a newspaper or listen to a radio will have learned such basic bomb protection rules as, one, seek protection from falling buildings and flying debris, two, cover up (even with a white sheet) against radiant heat, and, three, keep calm.

After idling for many months, atomic defense planning moved into high gear in Chicago on June 26, the day after South Korea was invaded. The city's Civil Defense Planning Committee now includes one full time NSRB representative in an advisory capacity, plus two retired army officers, also devoting full time in an effort to coordinate the program on an interstate, state, and county basis.

At the outset it became apparent that Chicago's police and fire departments were the best prepared of all local agencies to handle an atom bomb explosion. Under peacetime emergency plans the police department could converge 19 squad cars and five ambulances with 60 men upon the scene of disaster in less than 20 minutes. If the disaster took on the proportions of an atom bomb explosion, the police department's standby "emergency regiment" of 2,500 specially



trained patrolmen could be mobilized in less than four hours and moved to strategic areas throughout the city.

The fire department's house to house "automatic change" or "move-up" system—which is used to a limited extent every day—could place 22 engine companies, five hook and ladder trucks, plus high pressure hose equipment, and first aid squads at the scene of a disaster in a matter of minutes.

Because these systems were already in being, current planning has consisted largely of adjusting existing emergency orders to the much greater threat of atomic bombing. The police department has made overlay maps of strategic areas in the city and alternate traffic routes for evacuating casualties and dispatching first aid. The fire department has made plans for the partial dispersal of equipment from possible A-bomb targets and has recently completed a system for the dispersal of all equipment when an alert is sounded.

### Disaster Help

Both fire and police departments have standing agreements, as a matter of peacetime practice, with nearby cities assuring their help in any kind of disaster. But recently questionnaires have been sent to 103 neighboring communities for a precise report on available fire and police aid.

A primary problem in preparing for a possible atom bomb attack on a city the size of Chicago, is the handling of large numbers of dead and injured. Theoretically, city defense planners place their numbers at 60,000 and 231,000 respectively. There was no public agency designed to cope with anywhere near this number of casualties, and a great deal of reorganizing and planning was thus required.

The expansion of existing disaster systems to meet the threat of a bomb attack was in itself a major problem. Already, however, plans have been completed to establish first aid teams at every street and alley around the periphery of a bombed-out area. These teams, each comprised of 84 doctors, nurses and technicians, have been set up in sufficient number to handle 231,150 survivors around a 2½ mile perim-

eter from zero point of an explosion.

Each team will operate a collecting station at a street intersection leading out of the bombed area. As bomb victims come out of the devastated area, those found to be radioactive will be separated out. Non-contaminated survivors will then be moved down another block where the injured will be separated from the uninjured. At a third

#### FOR YOUR PROTECTION . . .

Civilian defense authorities make these recommendations for personal protection in the event of an A-bomb attack:

##### *Do these things now:*

1. Have your blood type tattooed on your body — a quick transfusion may save your life.
2. Take immunization shots against smallpox, tetanus, triple typhoid.
3. Have one family member take a Red Cross first aid course.
4. Kill rats and flies as dangerous disease spreaders.

##### *If an alert sounds:*

1. Remain calm and ignore rumors, they may be enemy inspired.
2. Seek protection from falling buildings and flying debris.
3. Cover up against radiation.
4. After a blast, help the injured and give first aid.

point, somewhat farther away, hysterical survivors will be separated from those who received no injury whatever.

Radioactive victims will be chiefly decontaminated by water tanks. Afterwards, they will be moved to the rear where the uninjured are collected and assist in giving aid to the injured and calming the hysterical.

The medical phase of civil defense is further organized for protection against possible biological warfare as well as protection against radioactivity. All emergency medical units are to be equipped to detect destructive chemicals as well as bacteria which might be dropped by the enemy.

In addition to the emergency first aid teams, special hospital teams are being set up to perform minor emergency operations. Extensive surveys have been made in a 100 mile area around Chicago to catalog every building that might become an emergency hospital. In-

cluded are such structures as bowing alleys and factory buildings.

As a further precaution, the medical defense group will ask each resident to become a "walking blood bank" by having his blood type tattooed on his body. This will enable whole blood transfusions to be given without the necessity of finding people with matching blood types.

Treating the injured after an atom bomb explosion involves a major supply problem. Considerably more doctors, nurses, and people skilled in first aid would be needed of course, than could be found in the city and suburbs. To recruit additional help, a complete inventory has been taken of all doctors and nurses within a 150-mile radius.

### First Aid Training

The Red Cross has called 2,000 World War II instructors back into service and expects to give several million additional people Red Cross first aid training. Beginning this month, 10,000 eighth grade pupils in parochial schools will receive a full year's training course, and public schools may follow suit.

The amount of emergency medical supplies that can be obtained in event of disaster will depend largely on transportation facilities available. Inventories of blood banks in neighboring cities have already been made, and the amount of available bandages and medicines is also being determined. Because of the large quantities needed, stockpiling of such supplies is regarded as impractical.

Transportation and communication committees, both essential elements of the over-all defense picture, have made inventories of all methods of transporting people and supplies, including taxi cabs as well as ships and railroads. "Ham" radio operators have also been organized to serve as a major communications network for summoning aid immediately after an explosion.

Public utility companies are playing an important role in defense planning. Commonwealth Edison Company is studying plans for routing electrical current around a bombed out area, and the Chicago Transit Authority is working on

(Continued on page 50)





Recall of reservists has begun skimming off many men being prepared for top industry jobs.

Acme

# Our Missing Vice Presidents!

**A Troubled Decade Has Cut Tomorrow's Executive Ranks**

By BURLEIGH B. GARDNER

**T**HE plunge into partial mobilization brings to sharp attention the problem of top executive manpower. Management in many concerns has been aware of a serious gap in experience and ability below the presidents and vice presidents. In many cases there seems to be no one in the line of succession potentially capable of taking over the top jobs. In short, where are our next vice presidents coming from?

In one medium-sized manufacturing concern, the chairman of the board is 60, and ranking executives — president, vice president and sales manager — are 54, 53 and 53 years, respectively. Below them are their assistants and department heads. These men are in their middle thirties or, in the case of two, in their early forties. The complicating factor is that six of nine department heads are military reservists, as well as one of

three assistants, and 19 out of the 26 supervisors.

The gradual calling up of reserves thus leaves the company with few trained junior executives and, probably more disquieting, cuts down the timber from which the top executives may be selected 10 years hence.

## War Took Rising Men

The root of this problem lies partly in the last war. Then, military manpower demands were so great that many rising men lost valuable years of executive experience. Furthermore, even before the war, many firms had given too little attention to the matter of executive development. When wartime expansion hit, they had to make out as best they could; it was no time to worry about future

executives. But now the future is here, seasoned men are even older, and many younger men will be off again.

The present military situation indicates that unless we move rapidly into total war we can expect the following slow drains:

First, a relatively modest demand for military manpower. The size of the armed forces, however, will probably grow steadily for the next year or more.

Second, there will be a demand for men of proven ability for military or related services, taking them from jobs in business. This will skim off many men now preparing for top positions. The extent and speed of this trend will increase greatly if our military commitments expand.

Third, there will be a drastic re-



shuffling of organizations, especially in manufacturing. New plants, new products, new processes under wartime tempo mean men shoved rapidly into new jobs and heavy responsibilities, and top men under still heavier pressures.

Finally, there will be a let-down in sales effort. Many companies will lose interest in aggressive selling and sales organizations will again grow soft and lose their drive.

In the end, this will mean that organizations which have not developed competent men ready to step into top positions will probably be even weaker after the war.

### Slipshod Selection

During the last war, many organizations which expanded rapidly and filled executive jobs in slipshod fashion found they had serious liabilities on their hands when the shooting stopped. A young engineer, for example, was hastily placed in charge of sales for a small company producing industrial

were largely confined to customer service and technical advice. Later, however, when the situation required aggressive sales effort, he could not produce. He regarded selling as a sort of menial pleading for orders. Furthermore he did not know how to develop a strong sales organization nor how to develop the market for his company's consumer products.

### Executive Failures

Unsuited for his peacetime role, he failed dismally, thus handicapping his company when it was striving to establish its postwar position.

The executive personnel problem facing business today boils down to two considerations:

1. What to do about staffing the junior executive levels, since many of these men are in the reserves and may be called soon.
2. What to do about acquiring executives who not only will be valuable in war production, but

gear our economy to military needs for many years.

Under these conditions management must not become so lost in its immediate problems that it forgets to prepare for the long pull. And many companies must realize that its present top management cannot hang on long enough to see them through. Some other generation of management will have to carry them through the adjustment to a peacetime economy.

With this in mind, top management must face squarely the problem of junior executives. It should look at the men available for promotion in terms of both experience, past performance and basic capacities. Are there younger men under the junior executives who have the basic abilities but lack the breadth of experience and knowledge? Are older, more experienced men capable of handling greater responsibilities or have they reached their ceilings? Or do these men have possibilities which they have never had a chance to develop?

### Pick Good Men Now

This assessment should not be done hastily or put off until there are positions to be filled. Regular evaluation of personnel from time to time will provide far better results than will hasty judgments.

Furthermore, there are now available better tools to help judge the basic qualities of the individual and his capacity for development. The wise utilization of psychology's latest testing tools, such as the Thematic Apperception Tests, together with careful observation of the individual in different situations can give a very useful appraisal of his capacities and limitations. Then when there are positions to be filled, even though the ideal man is not available, management will know what it is doing and the limitations of its choice.

Management can take an even more active role in assuring itself the best possible pool of potential executives. Merely discovering that certain men have latent potentialities as future executives is only a partial solution to the problem. A psychological testing program can be beneficially supplemented with an intelligent executive training

(Continued on page 32)



For industry, the draft — taking only young men — is presently of secondary importance.

parts and sub-assemblies sold to other manufacturers. During the war the sales department was primarily concerned with straightening out customer complaints and difficulties with little organized sales effort. Afterwards, the company decided to bring out some consumer products as well as maintaining its production for other manufacturers.

The young engineer had performed capably when his problems

also an asset when peacetime civilian production is resumed.

At the beginning of World War II, the nation moved abruptly from a peacetime to a wartime economy. Then there was the expectation that the war effort would be a reasonably short-run affair, and that we could return shortly to the consideration of such matters as executive development. Now we face the probability that we will



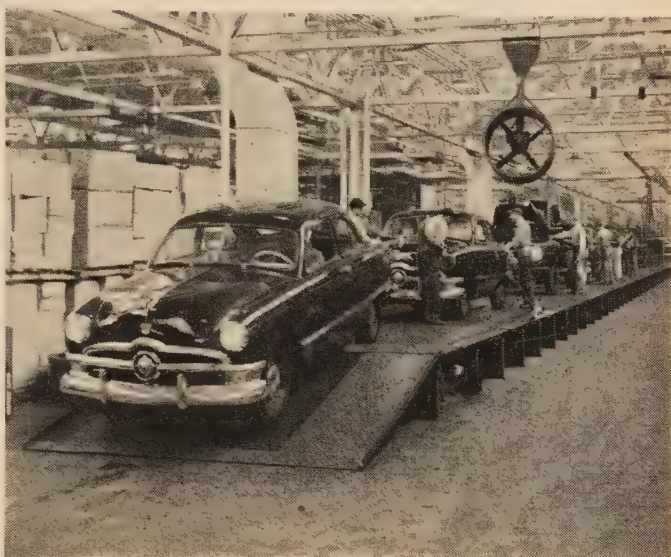
# How Much Mobilization?

PRESENT PLANNING ENVISAGES ONLY A "SIX PER CENT WAR"



steel, essential to civilian goods like ranges...

*Hotpoint, Inc.*



*Ford Motor Co.*

...and autos, will be earmarked 10 per cent to war

**H**OW much mobilization does the Korean war mean? The answer to this question, which has been a paramount one for U. S. industry since the shooting started in the Far East, has finally begun to emerge in Washington. It is: About six per cent.

Any such categorical answer to so fundamental a question is, of course, over-simplification. It cannot have meaning until its conditions are understood and its variables calculated. As a gross, overall percentage it obviously will not apply uniformly throughout industry. Defense officials estimate, for example, that in steel the diversion from civilian to arms production will amount to 10 per cent.

But as a measure of what changes the Korean war has wrought in the U. S. economy it is an important figure.

It is both a permanent and a minimum figure. It is permanent because the test that Korea provided of our national preparedness convinced us that our military muscle, while infinitely stronger than at the time of Pearl Harbor, was

not developed to the toughness required by the world of 1950. It is minimum because even if the Korean war ended quickly without further complications, the tapering off would be relatively slight. As long as fighting lasts, it is a rock-bottom figure. It is more likely to increase than to decline.

## "Total War" Comparison

This is the basis on which it is computed:

The government started its preparations for the current fiscal year with a military budget of \$13.5 billions, representing 5.4 per cent, not of the federal budget, but of the gross national product in goods and services.

Since shooting started, President Truman has submitted appropriations requests for an additional \$17 billion, sure to be honored in the main by Congress. There has been an increase in the national product

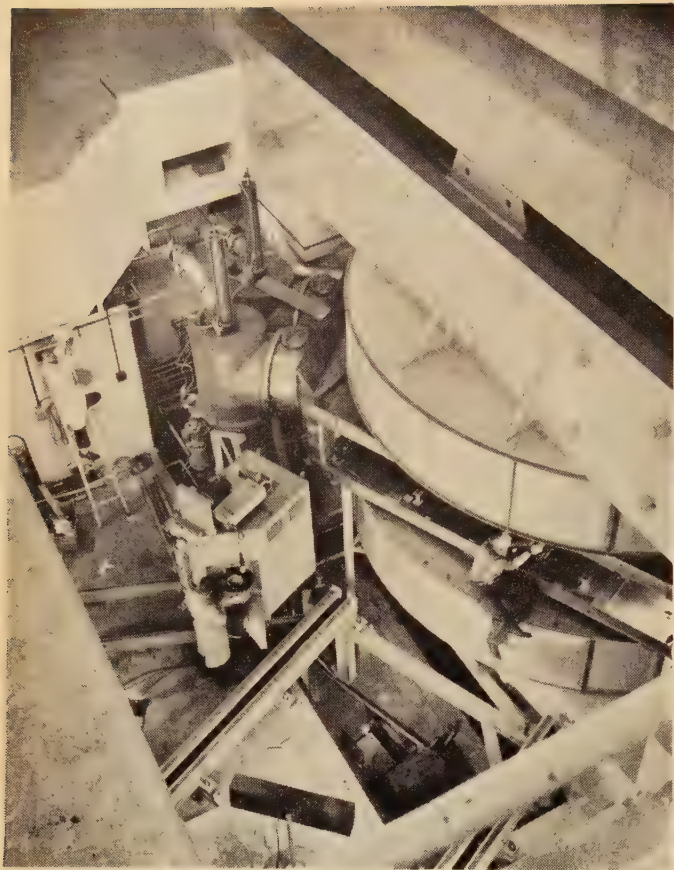
(now estimated to be running at the rate of \$270 billions annually) and the total of \$30.5 billions in defense spending represents about 11.3 per cent — or an increase of approximately six per cent attributable to war. This is the amount that will be subtracted from the civilian economy as it existed prior to Korea.

The comparative size of the effort this calls for can be better understood if we remember that in the peak year of World War II (1944) we devoted 35 per cent of the national income to war. Since war cannot take 100 per cent of the national product, another way of measuring the strain of Korea is to compare the 11.3 per cent with the 35 per cent of World War II. By those terms it will be roughly one-third the effort — 32 per cent — winning the present conflict.

What is mobilization? The welter

*(Continued on page 50)*





University of Chicago's new \$2.2 million synchrocyclotron tests influence of heavy nuclear particles on living tissue



Chicago U's \$12.6 million nuclear-biological-metallurgical center rises across the street from historic Stagg Field

By DANIEL F. NICHOLSON

# Problem: Find An Ivory Tower

UNIVERSITIES RATE A SHINING "A" FOR PRACTICAL HELP TO BUSINESS

**A** CHICAGO manufacturer ran up against a problem that was too tough for the engineering department several years ago. An important customer wanted a tank built that would withstand extreme pressures. Development of an entirely new design, involving a complex problem in higher mathematics, was necessary. So an appeal for help was made to the famed mathematics department of the University of Chicago. The mathematicians came up with the answer.

Some time later the same manufacturer had another puzzler, and the same university but a different

department supplied the answer. This time the company had a contract for work in a country on the Red Sea. Accurate information was needed on climatic conditions in this far away land. The university's geographers had it, or knew how to find it.

## Assistance Calls

During the course of a year, hundreds of such calls for help are made to the colleges, universities and technical schools of the Chicago area by commercial and industrial firms, trade associations, professional men, and local, state and federal governments. Often the

help that is wanted requires only the expert counsel of an authority, but sometimes it involves a research project that continues for many months and calls for a substantial expenditure.

Businessmen have learned to respect the college professor as never before. The colleges in turn are finding their growing partnership with business to be advantageous for two reasons: they can learn a lot from the businessman, and the corporation may well be the financial salvation of non-tax supported institutions faced with meager interest returns on investments and the prospect that high income taxes



will prevent large accumulations of private wealth which, in the past, have been the source of endowments.

This Fall Northwestern University's graduate division in the school of business will be transferred from the main campus in Evanston to the downtown Chicago campus in order to bring closer contacts with businessmen and to make it more convenient for them to address and confer with graduate students.

### Atomic Research

Perhaps the highest plane on which the new partnership is functioning is in the mysterious realm of nuclear fission, or atomic energy. It will be remembered that the first nuclear chain-reaction pile was put in operation on December 2, 1942, under the grandstand of the athletic field at the University of Chicago. The Atomic Age had arrived. But along with this history-making event came the sobering realization that it had been brought about largely by the research of European scientists. The United States, wonderfully advanced in applied technical science, was woefully weak in fundamental or basic science, the foundation for all technical progress.

The University of Chicago, already one of the nation's most important centers of basic research, announced a plan to continue basic research into nuclear energy so that

humanity might benefit from its possibilities for good. Business was offered the opportunity to help support this research for the common good, and has responded to the tune of more than three-quarters of a million dollars annually. Twenty-six big companies are contributing from \$20,000 to \$50,000 a year with no promise that they will receive any direct benefits whatever. The companies are benefiting, however, in ways they may not have anticipated. They are privileged to send their own engineers or scientists to two-day conferences held quarterly, at which they hear discussions by the scientists doing nuclear research and visit the laboratories of the three "institutes" in which the research is conducted — the Institute for Nuclear Studies, the Institute for the Study of Metals, and the Institute of Radiobiology and Biophysics. Corporation executives report that their engineers return from these conferences inspired and stimulated.

When business asks a college for help, the problem may be prosaic, or it may be a challenge that intrigues the knowledge-seeking educator. Economists on the staff of

Loyola University are called upon frequently to serve as arbiters in labor disputes, to advise on pension plans, or to help with supervisor training programs. Loyola senior students in personnel work, under the direction of Dr. J. L. Rosenstein, associate professor of economics, have investigated the personnel practices of more than 200 companies in the Chicago area, and these investigations have been the basis for specific recommendations to each of the companies.

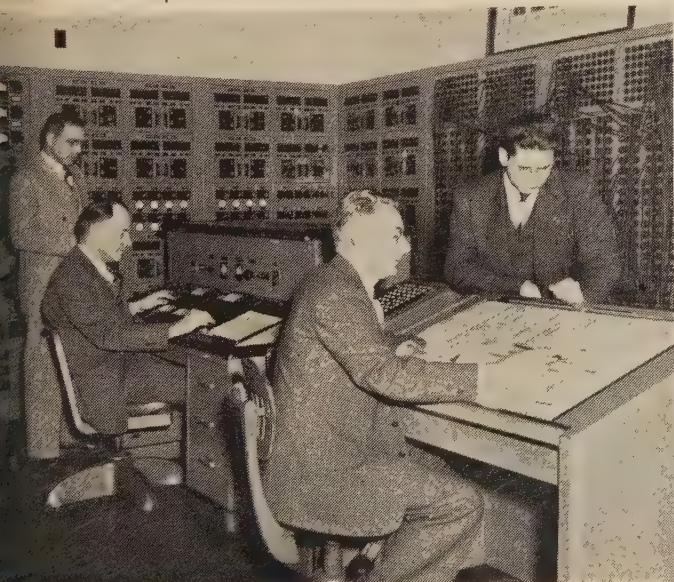
### Employee Testing

Roosevelt College has set up a Clerical Staff Assessment and Selection Program to aid employers in the selection of typists, stenographers, and general clerical workers. This service, available to all business firms, is used to test general intellectual level, clerical aptitude, and typing and stenographic skills.

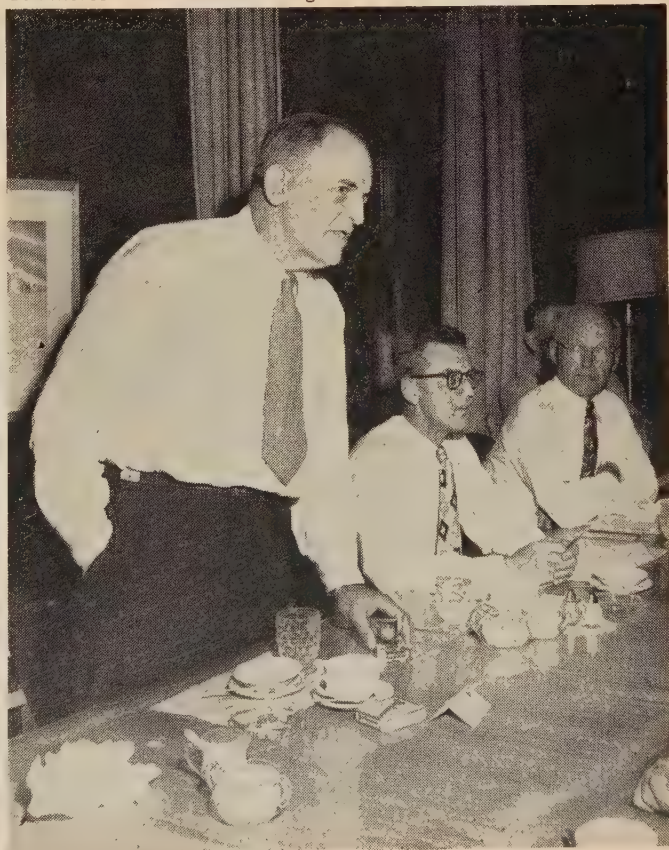
De Paul University in the last four years has developed a program to bring to industrial firms and business establishments a psychological analysis and solution of problems in such fields as selling, per-

*(Continued on page 26)*

Utility company officials plotting expected future service loads with help of intricate calculator at Illinois Tech



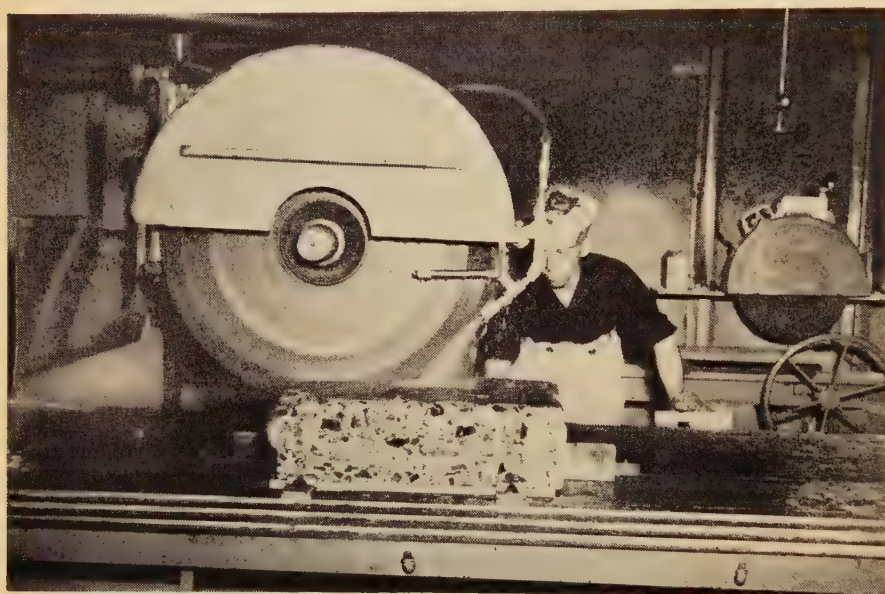
Associate Dean E. C. Davies of Northwestern's School of Commerce addresses lunching furniture store executives



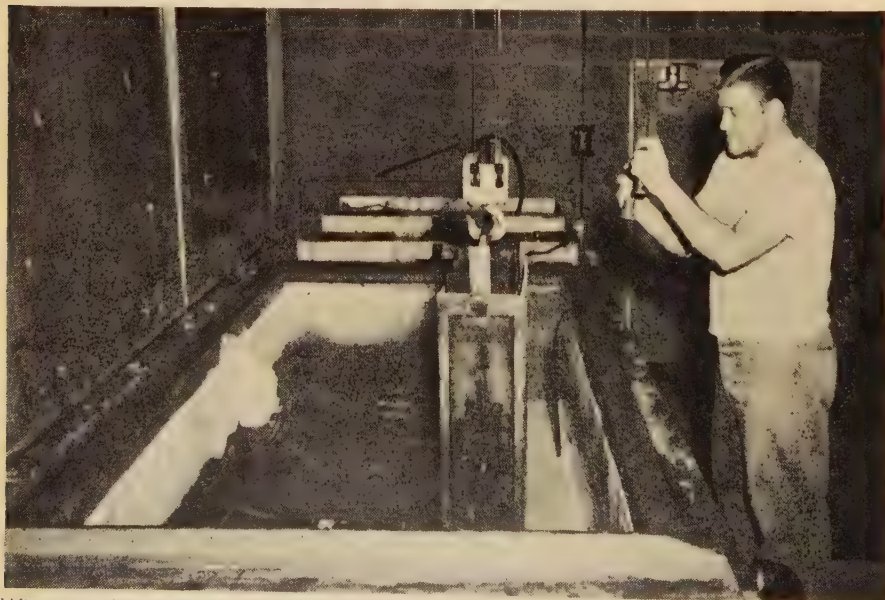




Portland Cement Association's new and ultra-modern research laboratory in Skokie, Ill., 16 miles northwest of downtown Chicago where miracles are in the making.



Heavy-duty carborundum cutting edge of concrete saw slices through a pavement slab 11 inches thick carving out smaller samples for laboratory testing.



Winter and summer weather changes are greatly accelerated in this test room where concrete specimens are immersed in water tanks ranging from 80°F. to -20°F.

**T**HERE'S a bag of cement miracles in the mixing in a new laboratory in the quiet, shaded Chicago suburb of Skokie. This \$3,000,000 facility, completed just this summer, triples the research and development activities of the Portland Cement Association, a trade group supported by 67 cement companies that make over 95 per cent of the nation's cement.

Among the first miracles the Skokie people expect to pass:

A concrete that will stick to old roads so the worn pavements won't have to be completely rebuilt and road repair bills can be slashed in half.

A concrete that will be strong enough to replace steel in spans, bridges or wood in the nation's one billion railroad ties.

A way to reduce the cost of a factory for making a new-type lightweight concrete so virtually every small town can afford to build a plant of its own.

### Climatic Tests

To learn the basic facts that may lead to such developments, the association's researchers are studying 27 variations of portland cement derived from the limestone and clay deposits of this country. Its field men have sunk a thousand concrete beams into alkali soils near Sacramento, California. They've exposed two thousand concrete specimens to soil and weather on experimental "farms" in Illinois and Georgia. They've even driven concrete piles into the waters of Cape Cod, into the Hudson River and into both of our oceans.

At the new Skokie lab, they have 15 rooms devoted to reproducing just about every climate known to man from the Sahara's dry heat and the Persian Gulf's high humidity to the freezing temperatures of the Arctic. Elsewhere, they've some 25,000 containers stored away with raw materials and cements that are sitting out a long time study which was begun in 1940 and won't be finished until after 1970.



# CONCRETE PROGRESS!

From A Laboratory In Skokie, Ill., A Bagful of Modern Cement Miracles

By MITCHELL GORDON

Meanwhile, Skokie researchers are busy studying concrete in every conceivable way; under a microscope, in a test tube, in great crushing and pulling-apart machines that show at what pressure samples fall apart.

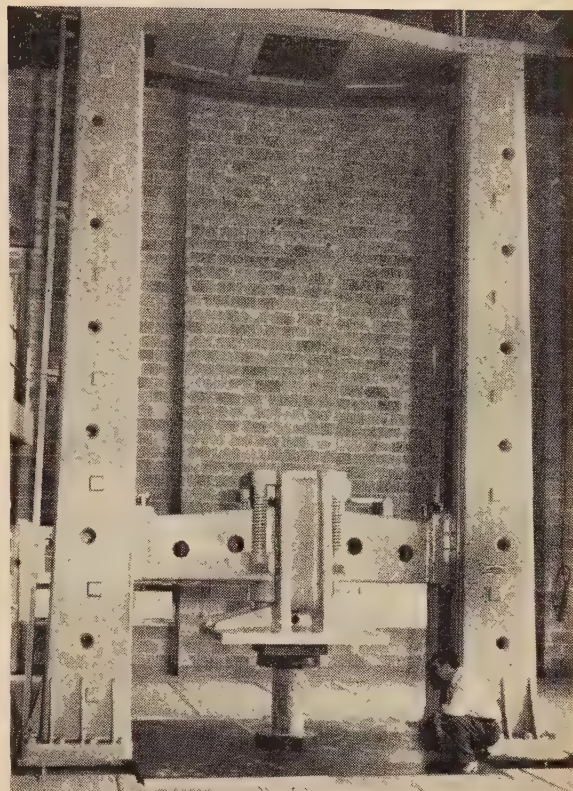
One project of great significance to motorized America is concerned with road rebuilding. Miles D. Catton, development director of P.C.A. says, "Our objective in this particular project is to devise means of bonding new layers to old concrete. Right now our problem is that we can't pour a new layer on top of one that's worn out because the new slips on the old. So we have to rebuild the road completely. But if we can develop a concrete that will stick to old roads, we should be able to rejuvenate a modern, two-lane 24-foot-wide highway for, say, \$20,000 a mile instead of having to rebuild it at a cost of over \$50,000."

## Concrete Bridges!

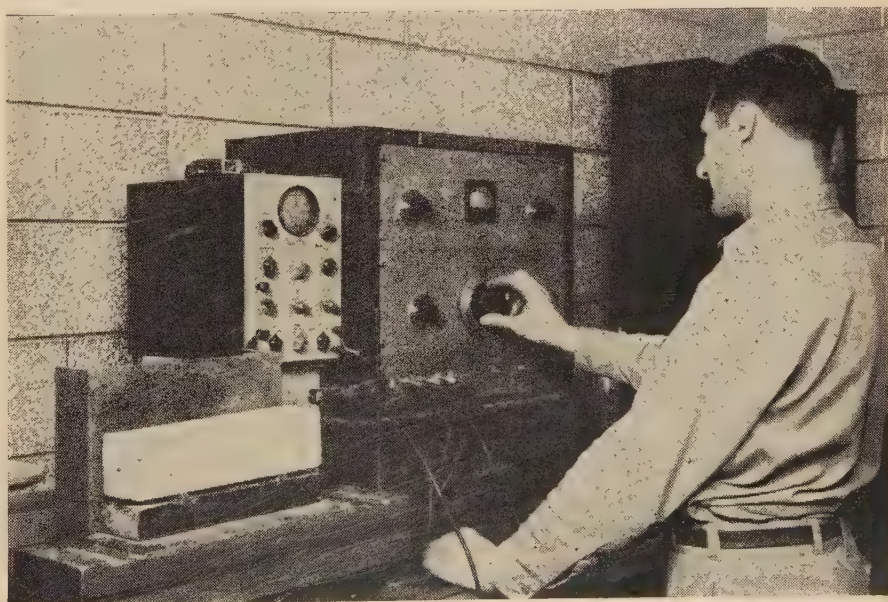
Making concrete strong enough to replace steel in span bridges and wood in railroad ties calls for overcoming a weakness inherent in the concrete itself. That is, while it can stand great crushing forces, a concrete beam bends and cracks in the middle when even a relatively light weight is suspended from its end. Researchers at the laboratory have been observing a solution demonstrated as far back as 1930 by European engineers fighting high steel and lumber costs. But they'd like to make it more practical in this country. The solution is based on a principle similar to pushing on both ends of a stack of books to keep them from collapsing in the

middle. High tensile strength steel rods will provide the push if they are kept stretched until the concrete around them hardens. This is called pre-stressed concrete. Before the end of 1950 the country's first pre-stressed bridge, with a 160-foot center span, will carry Philadelphia's Walnut Lane Bridge across the Paper Mill Creek Valley.

Not quite as far along is the search for a way to reduce the cost of building a factory to make a new-type lightweight concrete. This could mean an entirely



This huge tester exerts up to 1,000,000 lbs. pressure



Lab technician listens to concrete "sing" through a "phonograph" tuned to receive high frequency vibration to determine durability of various concrete specimens.



new industry for many small towns—one for producing a lightweight “aggregate” to replace the stone, gravel and sand now mixed with cement to make concrete. The present cost of building a factory to make lightweight aggregate, which consists of burned clay, is about \$250,000. That’s much too expensive for any but metropolitan areas. To put it within the reach of small



Moist curing room, simulating 100 per cent humidity, used to test concrete specimens

towns it is estimated that the cost must be pared to \$75,000. The research people’s big hope lies in making the factory’s principal unit—a long pipe-like kiln that burns the clay—more efficient so as to reduce both its size and operating cost.

Cement researchers and developers are confident they’ll solve these problems. Their confidence stems from achievements that date back to 1916. That’s when they discovered the Water-cement ratio, which showed the way to making stronger concrete by keeping the water content down. Since then, they’ve accomplished many cement miracles including the development of soil-cement to permit cheap construction of soil-cement roads, the introduction of tilt-up construction to reduce building costs, the adaptation of concrete statues to decorative “built-in” colors that give the effect of marble at the price of concrete and the protection of concrete pavements against scaling due to frost action or salts used to melt ice.

The development of soil-cement in 1935 solved the problem of paving the light traffic road, where usage didn’t justify the cost of laying a concrete pavement but where the inconvenience and maintenance costs of stone and gravel roads were almost as costly an extravagance. Finding a cement that could be mixed with any type of soil instead of the usual sand, stone and gravel aggregate made paved country roads literally dirt cheap since 90 per cent of the road was already on the site. All the builder of a soil-cement road needs are some farm-like cultivating machines to pulverize the dirt and mix the cement into it, a water truck to sprinkle water over the mixture and a roller to compact it. That saves buying and hauling 5,000 tons of aggregate for every new mile of 20-foot-wide road. There are now over 3,600 miles of soil-cement roads and streets in use in this country. Of 18 such roads recently studied after five to nine years’ service, 15 have required no maintenance as yet except the usual bituminous surfacing repairs.

Pouring concrete walls in forms that are laid out on the ground and fitting them with “accessories” like windows and lintels while they’re easy to get at and then tilting the whole finished wall up has reduced construction costs by as much as 23 per cent.

#### “Marbleized” Concrete

Making concrete with “built-in” colors so it looks like marble but costs like concrete, was another development promoted by the P.C.A. That’s no problem if the builder wants to go to the expense of getting colored stones or marble chips, mixing them in with the concrete and then have only those show that end up on the surface. The problem was in finding a way to use all the colored stones and chips on the surface without having to fit them in one at a time. Solution: soak a piece of plywood in a solvent to make it pliable enough to follow the contours of a statue, coat its inside with a glue strong enough to hold the stones but weak enough to yield them to hardened concrete and place the stone-covered plywood form against the concrete while it’s hardening. First use of this so-called “aggregate transfer

method” was to make an ornate angel in “pink Georgia marble” above the entrance of a mausoleum in Wilmington, North Carolina, at one-fifth the cost of a genuine pink Georgia marble angel.

To keep concrete pavements from scaling under frost action as the freezing moisture expanded in capillaries that were too small, more air bubbles were added to the concrete so the expanding water would have somewhere to go. This was accomplished by adding a resinous or fatty material to the concrete mixture which created “suds” and formed air bubbles as the concrete hardened. It added little to the cost of the concrete. One such resin, for instance, known as vinscol resin, sells for five cents a pound in carload lots. Concrete so treated became known as “air-entrained” concrete and has been specified for highways in nearly all northern states.

The probers at Skokie have more than these accomplishments to spur them on. Their new \$3,000,000 lab which triples their previous research facilities, has, in addition to its 15



“Soil-Cement” project aims at utilizing cheap, local soils in cement production

climate-reproducing rooms, chemical and physical labs, an electronics lab, soil study laboratories, giant testing machines and an X-Ray unit. In the chemical lab, for example, ingredients of test specimens are analyzed before and after they’re subjected to various climatic conditions. The chemists have even analyzed specimens from the ancient

(Continued on page 26)





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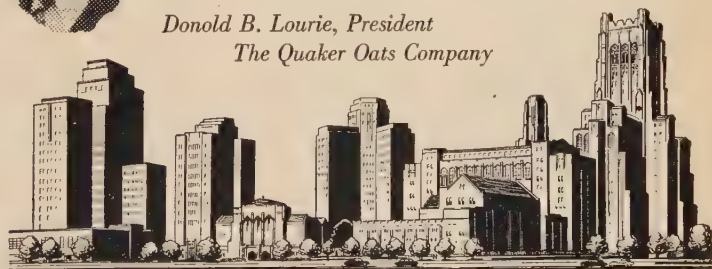
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The Chicago Campus — (Left to right): Abbott Hall, Passavant Memorial Hospital in the Floyd E. Patterson Memorial Building, George R. Thorne Hall, Wesley Memorial Hospital, Elbert H. Gary Law Library, Levy Mayer Hall of Law, Wieboldt Hall, and Montgomery Ward Memorial Building.

## THE CHICAGO CAMPUS

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## Concrete Progress

(Continued from page 24)

Roman Aqueducts and the Appian Way to find out what kept them together so long. They found they were made of volcanic rock. But they think modern concrete will last much longer.

One of the giant testing machines is a big crusher that looks like massive tapering goal posts with a heavy mallet in between. This machine can press down with a million pound pressure. To keep it from

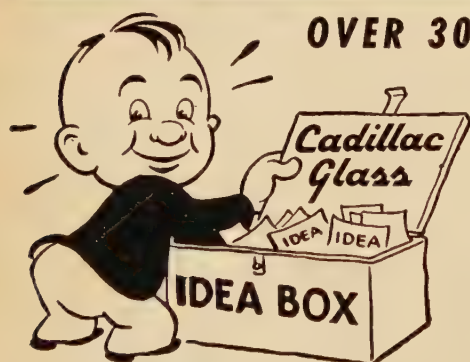
crushing the concrete floor, there are 27 piles supporting the 262 cubic yard base. Nearby is a 400,000 pound machine that can crush or pull concrete apart equally well. Control mechanisms are so delicate that these machines can be used to break the crystal of a watch without damaging the mechanism.

The electronics lab is used largely for determining the quality of the concrete specimen without hav-

ing to destroy it as the crushing machines do. Its most prized instrument is called a soniscope. The soniscope takes the pulse of the concrete. That is, it puts one of its "arms" on one edge of the concrete and the other "arm" at the opposite edge and passes a radio pulse through from one arm to the other. Then it tells how long that pulse took to travel — to the nearest millionth of a second. By correlating these measurements with measurements taken on specimens of known qualities, the researcher develops data on the new specimen.

To conduct these activities, the association employs about 80 people in the Skokie lab and another 300 in field operations throughout the country. It charges no royalties on any of its discoveries. Last year P.C.A. answered 300,000 requests for information on cement and concrete.

Progress made at Skokie will add to a market that's already vast. Last year the nation's 151 cement-making plants, each of which consists of a quarry and a mill for crushing and burning the limestone and clay rock, shipped over 206,000,000 barrels of cement worth \$474,000,000. That was more cement than had ever before been shipped in this country in any single year. Cement people think 1950 will be still bigger.



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## Find An Ivory Tower

(Continued from page 21)

sonnel, and others. An institute of Industrial Psychology curriculum of seven courses is being offered for the second year by the University's college of commerce evening division. Approximately 150 representatives of Chicago area firms attended the Institute last year. "We're not concerned with individual or social psychology, and we will deal only with commercial and industrial problems which can be remedied without an interruption of productivity," reports Dr. Frederick W. Mueller, dean of the commerce school. Dr. Mueller and his associates hope to set up in the future in-plant service to handle special cases.

In order to keep businessmen informed on its research activities, the University of Chicago brought



but in August the first issue of a new four-page publication, "Research Reports," described as "A publication for business executives about current research in the University of Chicago." One of the developments reported in the initial bulletin is a new test for executive qualities, developed by Professor L. L. Thurstone whose "aptitude" test is given to students entering more than 700 colleges. The new test is already in use by a large mail-order house and a New York insurance company. "Businessmen who have a special interest in a subject may obtain technical or other information on request to Research Reports," the bulletin advises.

But if some of the difficulties businessmen bring to the institutions of higher learning are undramatic, others require new facts and the establishment of new principles. This is the sort of thing on which college professors thrive. One college group is working at the present time on a study to determine the effectiveness of the advertising of one of America's big corporations. Another study that has intrigued the professors is an investigation of consumer preferences.

#### Trade Group Help

Business has also turned to the colleges for expert advice and actual participation in the education of members of trade groups and in the operation of employe training programs. Northwestern University's nationally known commerce school is doing an outstanding job with trade groups. Special summer sessions or schools, some lasting as long as two weeks, have been set up for such organizations as the National Retail Furniture Association, the American Institute of Real Estate Appraisers, the Mortgage Bankers Association, the Scrap Iron Institute, and the Financial Public Relations Association. One program, the annual seminar of the Office Management Association of Chicago, has outgrown Northwestern's large facilities and is now held in the Stevens Hotel.

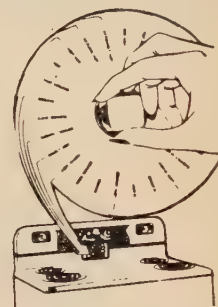
The School for Furniture Executives, held at Northwestern this year from July 17 through July 28, is typical of the special trade school arrangement. The University helped

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to set up the program and provided classroom facilities and living quarters for the 54 students who came from 22 states, the District of Columbia, Canada, and Switzerland. Ernest C. Davies, Associate Dean of the School of Commerce, addressed the opening luncheon, but only two other members of the faculty, Ira D. Anderson, chairman of the department of marketing, and James R. Hawkinson, professor of marketing, were included in the list of 27 speakers, the others were association executives, store operators, and specialists in accounting, personnel management, and other fields.

#### Special Interest Classes

A special course exclusively for the employes of investment bankers in the Chicago area is offered by Northwestern in cooperation with the Investment Bankers Association of America. The students attend classes from 3 to 5 each Monday, Wednesday and Friday afternoon for 20 weeks. A number of other schools in various sections of the United States provide similar training under I. B. A. sponsorship, and it is understood that arrangements are being made with a leading university to offer correspondence courses to investment banking trainees who cannot take advantage of classroom instruction. Northwestern also has a course in hospital management in its regular curriculum, and the University of Chicago offers a course in restaurant management sponsored, along with a continuing research program, by the National Restaurant Association.

Seminars and lectures will be offered to businessmen of the Chicago area during the Fall quarter at the downtown center of the University of Chicago. A lecture series on "Selecting Your Investment" by Arthur J. O'Hara, vice president and manager of the investment research department of the Northern Trust Company, will begin October 3 and cover problems facing an individual or family with \$3,000 to \$20,000 to invest. There will be seminars on "Personality and the Effective Executive," "Leadership in Conference Discussion," "Records Management Workshop," and "Commercial Financing and Factoring." A special

"Federal Tax Conference" will take place on November 1, 2 and 3.

The University of Illinois has taken a special interest in helping the small businessman of Illinois. On January 1, 1948, the state university established a Business Management Service under the direction of Professor Earl P. Strong of the college of commerce and business administration. The purpose of this agency is "to aid Illinois businessmen in solving their problems of management, and to serve as a clearing and distributing agency for new management ideas and techniques."

Contacts with businessmen are maintained through meetings and conferences held on the campus at Champaign-Urbana, special conferences with local groups, consultations with individual businessmen, and other means. Fourteen pamphlets have been published by the Business Management Service for free distribution to Illinois businessmen on such subjects as stock control, personnel management, cost cutting ideas, federal services available to the businessman, and so on.

Another agency of the University of Illinois operating for the benefit of commerce and industry is the Bureau of Economic and Business Research, headed by V. Lewis Bassie. The Bureau operates as a research division of the College of Commerce and Business Administration. It conducts research on business and economic subjects of particular interest in Illinois, and distributes economic data and research findings to businessmen and others throughout the state. The Bureau publishes a monthly magazine, "Current Economic Comments."

#### Research Progress

Chicago's resources as a research and educational center in technology have been enhanced by the progress made in the last ten years by the Illinois Institute of Technology and its affiliate, the Armour Research Foundation. Illinois Institute of Technology is primarily an educational institution and is interested also in fundamental research, while Armour Research Foundation, a separate corporation, is primarily concerned with applied research. In actual practice the

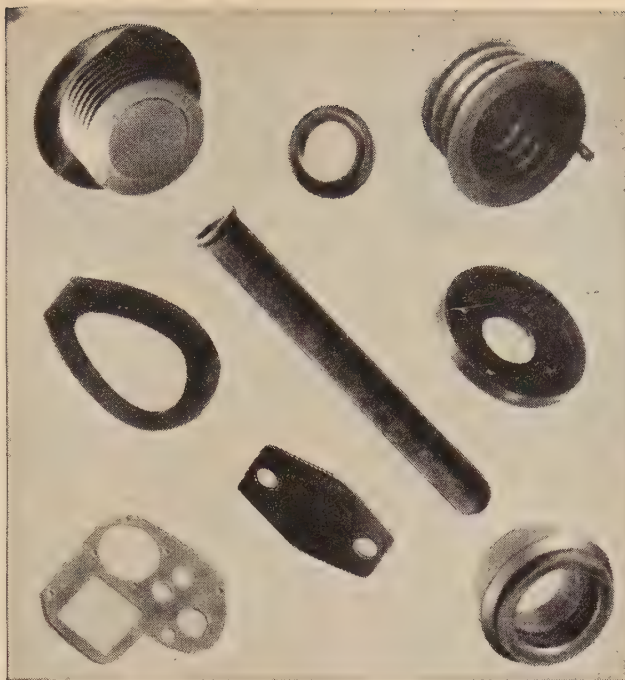


school engages in some applied research and the foundation does important basic research, and there is cooperation between them notwithstanding the clear-cut legal separation.

Fields in which the Illinois Institute of Technology and Armour Research Foundation have excelled include fire prevention, jet propulsion, ceramics, the study of noise, metallurgy, physics, chemistry, and various branches of engineering. Armour Research is one of the three largest research institutions in applied science in the United States, and its full-time staff of 640 compares with the college's faculty of about 450. Nationwide industries have established two permanent research organizations on the Illinois Tech campus. One is the Institute of Gas Technology and the other the Central Research Laboratory of the Association of American Railroads.

### How To Get Help

How does the individual business man go about getting help from a college or from one of its professors? A very little independent research will lead him to the noted specialists, such as Northwestern's expert on explosives, Illinois Tech's authority on gas turbines and jet propulsion, and the many other authorities in every field from anatomy to zoology. He can deal with these individuals directly, or, if his project is more ambitious and requires the combined talents of several experts and perhaps extended research, the businessman can work out an arrangement with the college. Professor George H. Brown, head of the marketing department at the University of Chicago and active participant in many research projects, suggests that the business man can obtain help in three ways: One, he can sign a research contract under which the university will have the right to publish its findings; two, he can arrange with the university for consultation and research of a confidential nature where the resulting information would not be of value to business in general; three, he can deal directly with a faculty member on a consulting basis. Professor Brown would like to see business call on the university more frequently. "Faculty people are



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highly intelligent and highly capable, and they are flattered to have business men come to them, especially when research opportunities and funds are in sight," says Professor Brown.

The Dean of Northwestern's School of Commerce, Joseph M. McDaniel, declares that the school's facilities will be used to the fullest extent to serve business. Every senior member of the faculty is now working directly with business, some as consultants, others as lecturers to special groups, advisers to trade groups setting up special institutes or educational sessions, and so on. The school approves these direct contacts because they lead to more competent instruction, says Dean McDaniel. The commerce school teacher who knows at first hand what is going on in business is a more capable and more interesting instructor, he declares.

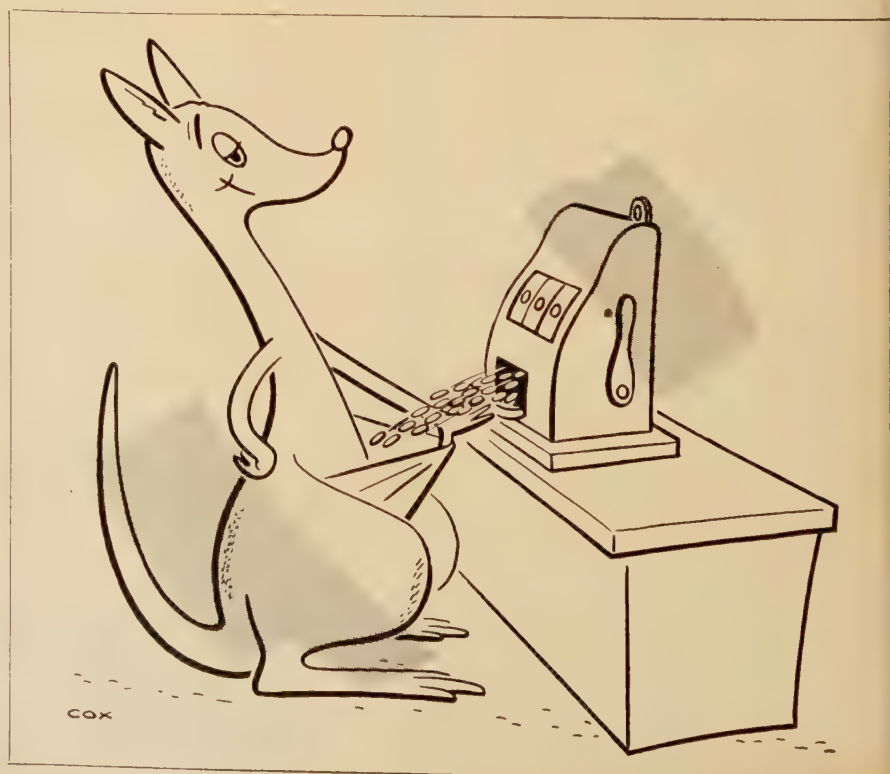
Chicago's educators insist that they are not in competition with private firms engaged in consultation and research, and they deny that their charges for service are cut rate bargains that private consulting firms could not meet. The educational institutions contend that the work they undertake is not the sort that the commercial research laboratory or consulting firm would be willing or able to do. Professor Brown has made an interesting dis-

tingtion. "Members of the university are interested in problems that are so complicated that they are beyond the scope of ordinary consultants. The professors look upon themselves as persons whose job is to go into unexplored areas, hoping to advance knowledge and in doing so taking risks of failure."

### Competition Issue

Probably the nearest approach to competition with private business comes when the college professor takes on a consultation assignment as an individual. But the professor cannot devote much time to sideline activities or his regular work will suffer. The schools realize the value of these outside contacts, and they encourage them. A handbook prepared by the Illinois Institute of Technology for the guidance of its faculty makes the following comment: "The institute recognizes that outside consulting work of proper professional character provides valuable experience and may improve teaching and scholarship. It therefore encourages this type of work and considers it a legitimate activity for full-time faculty members with regular academic appointments during the period of the year covered by such appointments."

"The institute does not stipulate specifically the amount of time which may be devoted to outside consulting work because of the in-







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dividual differences of faculty members in their work capacity and energy resources. In general, however, it believes that more than the equivalent of one day per week is excessive. The total amount of time should not interfere with the discharge of full-time institute duties."

The handbook urges faculty members to charge for their services at a rate at least as high as that made by independent consultants, "in order that staff members and the institute may avoid objections occasionally made by outside practitioners."

Armour Research Foundation is a non-profit corporation, but its charge for a research job is more than the actual cost. The difference, which would represent profit for an ordinary company, is used to finance fundamental research, to buy additional facilities and equipment, and to support public service projects for which the foundation receives no fee. Examples of recent public service projects include a noise survey in Chicago, and a dust survey that has included a monthly analysis of dustfall over the city of Chicago for the last three years.

If business is to get the most from the colleges and universities, it must be prepared to support and encourage them. This can be done in many ways. James W. Armsey, director of public relations of the

Illinois Institute of Technology and of Armour Research Foundation, has listed ten specific contributions that business can make:

Encourage employes to enroll in part-time study to increase their value to business.

Participate in cooperative programs in which students spend alternate periods in the classroom and in the plant.

Establish scholarships for first-rate young men and women.

Employ students (both graduate and undergraduate) during prolonged vacation periods.

Sponsor formal in-plant educational programs.

Establish fellowships for graduate study.

Sponsor fundamental research programs.

Contract for applied research on specific problems.

Endow professorships in specific fields, contribute funds for additions to physical plant.

Make unrestricted gifts which enable educators to expand programs now impaired by insufficiently regular income, or to embark upon new fields of education and research.

Some of Chicago's largest and most successful business firms are contributing in most if not all of the ways Mr. Armsey suggests. It is interesting to note that they don't concentrate their attentions on a single college or university, but take advantage of the fact that each excels in some respect.

### Our Missing Vice Presidents

(Continued from page 18)

ing program designed to speed up the development of all personnel who appear qualified for more responsible jobs. Thus, there is a considerably better chance that when executive jobs do become vacant, there will be trained men to fill them.

Under the conditions that confront management in our present period of semi-mobilization, executive training is more essential than ever. Without such a program, a company is inviting trouble, not only in the immediate future, when present executives will be drained off by the military, but also over the long haul when trained men will be required to

handle the difficulties of reconversion to peacetime production.

The fruits of haphazard promotions were evident throughout the last war. An able young personnel executive taken off placement work and put in charge of personnel in the manufacturing department of one company had extensive technical knowledge about people, but almost no experience with actual manufacturing and shop techniques. Under the pressure of personnel problems, material scheduling, manufacturing difficulties, etc., he was a failure. He finally had to take a three months sick leave while someone else straightened out his job.



Choosing the proper men to fill junior executive jobs is probably hardest in the smaller, family-owned concerns. Many of these companies were established by able, energetic men who worked day and night to develop successful firms. In the early stages they did everything, ran every job and made every decision. As their firms grew, they continued to dominate and developed the kind of organization in which they were the only decision makers. Such family-run corporations often have no one below the president who has developed the skill and habit of decision making, and, worse still, the men below the junior executives have no decision-making experience whatever.

### Expansion Problem

Similar cases were seen in a large organization which was opening new plants for military production. Wherever possible they attempted to staff the key positions in the new plants with supervisors and executives from their older plants. But some of the men who had been very competent in their old jobs as foreman, department heads, or superintendents, would go to pieces when put in the new plants. Apparently some of them could function well in stable, well-known situations, but when put in larger responsibilities in new and very difficult situations, they could not stand the pressure. All this, however, could have been predicted through use of the proper tools and evaluations.

For such situations, prompt evaluation of all junior personnel is essential, since long experience has shown that when the evaluation is done in the face of a crisis — meaning, a job must be filled in a hurry — the choice is often bad.

Unfortunately, the wartime acquisition of new executive personnel is often haphazard, since the needs of the moment seem to be paramount. A company may hire executives during a crisis with the thought that, if they do not work out successfully in civilian production, they can be released without harming the company. This policy was followed in World War II by one large manufacturing company with plants scattered across the country.

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The company lost to the military a number of able younger men who were rising into positions of real responsibility. Some did not return and those who did had been out of touch so long that they could not jump right into major responsibilities. Most of the executives hired during the war were mediocre.

Today, the health of the president and of one vice president is bad (a product of wartime overwork), a second vice president is over sixty and the third is fifty-seven. Below them are several able younger men, but most of them are highly specialized and subject to military duty. Thus, they have a situation in which they will probably need several top replacements in the next few years, yet they have no one available with the necessary experience or maturity in handling complex decisions. The situation might become rapidly worse if, under wartime pressures, they lose even a few of the younger men, and ill health forces early retirements at the top.

### Psychological Tools

The answer to the two problems of replacement of junior executives and acquisition of new, older executives to help with expanded war production, is basically the same. In either case, careful evaluation of young timber is necessary, just as careful evaluation of new, older timber is vital. Unfortunately, there is no paper-and-pencil procedure, no ordinary red and green lights which will flash over the heads of applicants and thereby simplify their selection. Psychological tests, such as the Thematic Apperception Test, are helpful but such knowledge must be carefully correlated with past experiences and then evaluated in the light of the new situation into which the man is entering.

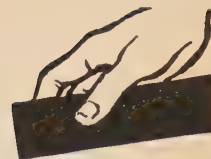
The job, of course, is not an easy one, but fortunately management has a number of valuable tools at its command. The most important thing is to recognize the problem immediately, and institute a program that will best insure a company against the foreseeable problems of the future. A speed-up in executive testing and training is the best assurance against executive shortages a year or a decade hence.





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### By DANIEL F. NICHOLSON

THE rise of the Chicago, Rock Island and Pacific Railroad Company in less than two decades from a marginal carrier seeking relief in the bankruptcy court to one of the strongest railroads in the nation received impressive confirmation early this year when the company refinanced its mortgage debt. The company sold \$55,000,000 of first mortgage bonds, due January 1, 1980, at 99½. The coupon rate of only 2 7/8 per cent was evidence of top credit rating.

Seventeen years ago, in June, 1933, the Rock Island petitioned for reorganization under the bankruptcy laws. Revenues had declined because of the business depression, and the carrier was further affected by severe drought in the agricultural areas it served.

### New Management

Late in 1935 the bankruptcy trustees brought in new top management. J. D. Farrington, now president, was named top operating officer. An extensive program of rehabilitation and modernization was mapped out and by 1937 was well under way. Relieved from the burden of nearly \$13,000,000 in annual interest charges, and with earnings improved by heavy wartime traffic, the Rock Island spent many millions of dollars to improve its equipment and facilities, and the service offered to customers. Heavier track was laid down, many grades and curves were eliminated, new bridges were built and others were rebuilt, shop facilities were modernized and consolidated, a program of Dieselizeation of motive power was started, automatic block signals and centralized traffic control were installed over a large portion of main line routes, land was acquired for industrial development, unprofitable branch lines totaling more than 600

miles were abandoned, co-ordinated rail-truck service was introduced, thousands of modern freight cars were purchased, the finest commuter equipment in the country was introduced, replacement of obsolete depots was begun, radio communication between cab and caboose and in switching yards was adopted, and so on.

### Out Of Trusteeship

The trusteeship ended on January 1, 1948, but the improvements and betterments continued. Total expenditures for this program in the period from January 1, 1937, to December 31, 1949, amounted to \$171,661,525.

Today the Rock Island is a modern, well equipped railroad offering first class service to shippers and passengers, but the program for improved and more economical service continues on a large scale. Most spectacular, to the layman at least, is the Dieselizeation program. The Rock Island expects to have its main line operations, both freight and passenger, completely Dieselized by the end of 1952 or the middle of 1953. The first purchase of Diesel power was made in 1937 when six switchers and six passenger locomotives were purchased. Last year, 46 new Diesels were bought, and at the end of the year the Rock Island owned 209 of these engines and 502 steam locomotives. At the end of 1936 the motive power had consisted of 1,160 steam locomotives. The economy of the Diesels was indicated by the fact that with nearly 40 per cent fewer locomotives, the railroad handled a greatly increased volume of traffic. This year the road has already acquired 20 new Diesel locomotives, and directors have authorized the purchase of eight more.

Other improvements under way include a freight cutoff at Denver, a 35 mile track relocation program



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between Atlantic and Council Bluffs, Iowa, that will eliminate curves and grades and save approximately ten miles, the purchase of 1,350 new freight cars, further extension of centralized traffic control and automatic block signals, an experiment with micro wave radio for communications between Belleville, Kan., and Goodland, Kan., the completion of the new "hump" switching yard at Silvis, Illinois, and the development of an industrial district near Denver.

### Big Financial Gain

The improvement in the Rock Island's financial structure has been as impressive as the changes effected in operations. When the bankruptcy ended on January 1, 1948, funded debt was reduced to \$100,853,150 of first mortgage and general mortgage bonds, \$2,759,000 of first mortgage bonds of a subsidiary railroad, and \$9,582,940 of equipment trust obligations, a total of \$113,195,090. This debt represented 34.9 per cent of the total capitalization, the balance consisting of \$70,538,193 of preferred stock and \$140,934,649 of no par common carried at a stated value of \$100 a share. Immediately prior to the reorganization, funded debt totalled \$302,682,770 and represented 70 per cent of the capitalization. Annual fixed charges under the new setup were \$1,700,000 as compared with \$13,000,000 prior to the reorganization.

In 1948 the outstanding debt was reduced again. The first mortgage four per cent bonds outstanding were reduced \$1,073,250 to \$25,772,850, and the general mortgage bonds were reduced \$39,518,507 to \$34,488,543. Equipment trust obligations increased, but the total long term debt at the end of 1948 was \$77,151,306, against \$113,195,090 at the beginning of the year.

Proceeds from the \$55,000,000 of new first mortgage bonds sold early this year, together with other funds in the treasury, were used to pay off all of the four per cent first mortgage bonds and the 4½ per cent general mortgage bonds. The railroad estimates that over the 30 year life of the new bonds, the saving in interest charges as compared with amounts payable on the retired bonds will total about \$27,000,000.

Although gross operating revenues of the Rock Island Lines decreased in 1949 to \$184,656,845, or 6.5 per cent, from the record high of \$197,404,990 reported for 1948, this was offset to a considerable degree by a 5.4 per cent cut in operating expenses. The latter was accomplished despite wage increases of about 20 per cent and the establishment of a 40 hour week for the majority of the carrier's employees. Net income for the year amounted to \$17,383,379, equal to \$9.84 a share on the common stock, as compared with \$18,036,632, or \$10.41 a share, earned in 1948. An initial dividend of 75 cents a share on the new common was paid July 15, 1948, followed by 75 cents a share on September 30 and \$1.50 a share on December 30. Quarterly payments have continued at 75 cents a share during 1949 and 1950 to date. The common stock and the preferred are listed on the New York Stock Exchange and the Midwest Stock Exchange.

### Scope Of Operation

The Chicago, Rock Island and Pacific Railroad Company is the successor as of January 1, 1948, to the Chicago, Rock Island and Pacific Railway Company. The Rock Island operates 7,630 miles of railroad in 14 states, with a heavy concentration of mileage in the area between the Rocky Mountains and the Mississippi. One main line runs from Chicago to Denver via Des Moines and Omaha, and connects with the Denver and Rio Grande Western; another main line runs from St. Paul, Minn., south through Des Moines, Kansas City, and Topeka to Herington, Kan., where one section goes southwest to Tucumcari, N. M. At Tucumcari a connection is made with the Southern Pacific, thereby providing a through transcontinental route from Los Angeles to Chicago for both roads. Another line runs south through Wichita, Kan., and central Oklahoma to Dallas. Other important points reached directly include Galveston, Little Rock, Memphis, Sioux Falls, and St. Louis. More than 2,100 miles of road are operated in Iowa, and more than 1,100 in Kansas.

Freight revenue amounted to \$150,250,920 in 1949, while passenger revenue totaled \$21,132,533.



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*HOW to solicit subcontracts from prime contractors;*

*HOW to fit into the National Security Resources Board planning for further mobilization;*

*HOW to relate personnel policies to Selective Service and Reserve calls;*

*HOW renegotiation may affect contracts currently being made.*

The Association will be equipped to give comprehensive help, as it was in World War II, on such problems as priorities, price controls, rationing, wage and manpower regulations, export and import controls, and regulations affecting transportation as they may be instituted in the developing mobilization.

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Freight tonnage is well diversified. Last year agricultural products accounted for 25.97 per cent of total tonnage, animals and animal products 2.64 per cent, products of mines (coal, gravel, stone, crude petroleum, etc.) 33.16 per cent, products of forests 6.11 per cent, manufactures and miscellaneous 31.12 per cent, forwarder traffic 0.10 per cent, and less than carlot freight 0.90 per cent. Major individual commodity tonnages were wheat 9.65 per cent of the total tonnage, coal and coke 10.49 per cent, gravel and sand 9.03 per cent, petroleum products 4.89 per cent, and lumber 3.68 per cent.

Three factors affected 1949 traffic adversely, according to the annual report for the year. These were:

"1. Government loans on wheat, made at a per-bushel level higher than cash market prices, and serving to prevent the movement of the grain from farms to markets. In addition, there was a lessening demand for export grain, moving through Gulf Ports; and also the storage of a considerable percentage of the 1948 crop in terminal eleva-

tors, which has restricted movement from local elevators to these points."

"2. The diversion of high-rated commodities to highway transport for a more advantageous freight rate, and a greater flexibility of service."

"3. The inroads on passenger traffic made by air lines through the ability of these carriers, without the aid of government subsidy, to lower rates to meet rail competition; and through the increasing volume of new private automobiles on the road."

### Strikes Have Affected 1950

This year the Rock Island has been adversely affected by strikes. Traffic during the first three months was curtailed by the strike of coal miners, and the entire railroad was completely shut down the last five days of June and the first 9 days of July by a strike of switchmen for a 40 hour week and 48 hours pay. Freight traffic had begun to show definite improvement before mid-year, however, and currently is ahead of 1949 levels. The war in Korea has had no noticeable effect on Rock Island operations thus far.

The switchmen's strike is not settled, but when it is the Rock Island will pay an increase of at least 18 cents an hour in wages, which it has already offered to do, or possibly more. Meanwhile road trainmen are asking for changes in rules that would increase their pay 33 1/3 per cent. The 1949 annual report declared that higher wages and shortened hours, plus increased costs of materials and supplies, have been offset in the past through "costly plant improvements, largely at the expense of the stockholders, or by improved methods and, in part to a great extent, by increased rates." The report warned that further cost increases will present a serious problem because any general rate increase will result in a further diversion of traffic to trucks and other forms of transportation.

Two points stand out in favor of the Rock Island's continued progress. One is the fact that it serves the fast-growing west and southwest, the other is the proved aggressiveness of the company in attracting new industries along its lines. An industrial department was created by the new management in

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the middle 1930s, and through the efforts of this department as well as the trend toward the west, 2,084 manufacturing plants, warehouses, grain elevators, and other enterprises were located along the Rock Island tracks during the twelve years 1936 to 1947, inclusive. In 1948 a total of 300 new industries were added, and in 1949 the railroad reported 249 permanent and 89 temporary industries were established on its lines. Substantial tracts at Denver, Colorado Springs and Des Moines are being developed, and last year the Rock Island acquired 364 acres of industrial lands in Chicago in connection with the purchase of the Pullman Railroad, an important switching railroad.

## Trends In Finance and Business

(Continued from page 10)

that of butter, cheese, margarine or cereals. The nation's biggest candy eaters reside in the mountain states, where per capita consumption has hit a high of 22.1 pounds, compared with a low of 12.4 pounds in the Southwest.

The candy manufacturer also finds that almost half the nation's candy is sold through food stores in which the average family spends 25.2 cents a week for sweets. The remainder of candy sales are widely scattered among candy stores, cigar stands, vending machines and the like.

» » « «

Front page headlines have had considerably more influence on the nation's economy since the outbreak of war in Asia than the more practical mechanics of supply and demand, according to the Department of Commerce which has just completed its first major survey of our semi-war economy. By far the most important influence behind the frantic business activity of the last two months, the Department finds, has been "forward buying" by consumers, retailers, wholesalers and manufacturers. Actual military buying has been responsible for no more than a tiny fraction of the "Korean Boom."

Here, in brief, is how the Com-

merce Department sizes up the turbulent post-Korea economy: The outbreak of war produced a "sharp upsurge" in demand for a wide variety of consumer goods, increasing July department store sales 21 per cent and total retail sales seven per cent over June. The consumer buying boom eased off a bit in early August, but not before it had seriously strained the economy at many points. As the big buying wave rolled on to the manufacturing level, it caught producers with order books already heavily back-

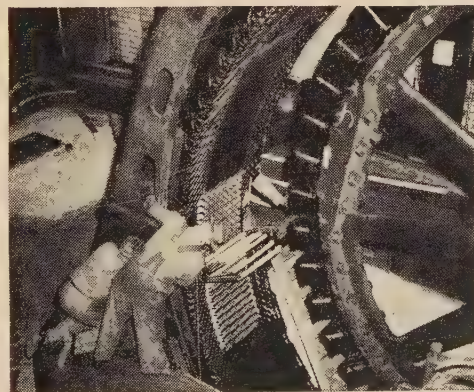
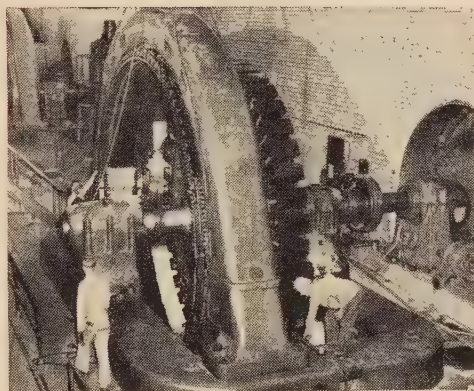
logged. In June, even before Korea, manufacturers' orders were already up 10 per cent over May, and subsequent new business simply backlogged the order books still more. Resulting price rises came quickly in industrial raw materials, farm and food products, and according to the department, a "widening group" of manufactured goods may be expected to join the price rise very shortly.

The most significant thing about the mid-summer boom, the department believes, is that it has been

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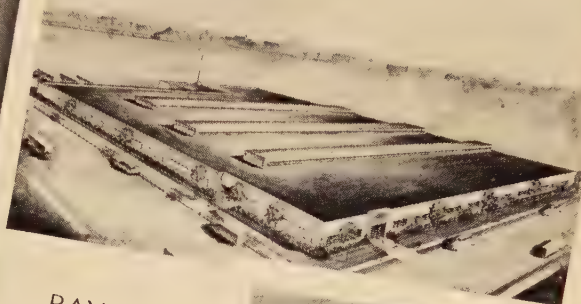
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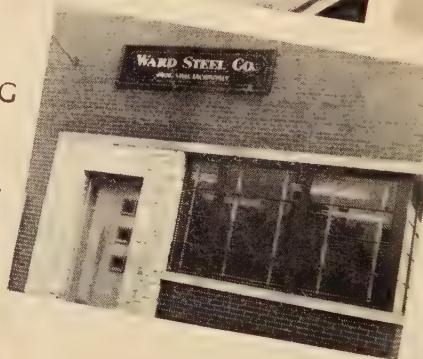
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generated almost entirely by varying degrees of "scare buying." We have yet to see any real influence from military buying, but it should begin to exert itself gradually in the next few months. Meanwhile total industrial production in July was just about equal to June, with increases in such industries as machinery and transportation largely offset by seasonal declines in other fields, notably steel and auto production which fell below earlier output records.

» » « «

Most people have known for a long time that the nation's big cities have been losing ground to suburbs and smaller towns so far as retail trade is concerned. Recently, the Census Bureau disclosed the latest in a series of statistics, gathered between 1929 and 1948, which indicate the extent to which the trade trend from big to small cities has grown in the past two decades.

The census takers found that the number of retail businesses in the nation's 32 cities with populations of 250,000 and over have actually declined one per cent from 401,081 in 1929 to 395,667 in 1948. In the same period, however, retail businesses in all other areas, notably suburbs of big cities and medium-size towns, have increased 20 per cent from 1,142,077 to 1,374,326.

All stores have greatly increased their sales, of course, but here again the big city merchants have run second best. Total retail sales of big city merchants amounted to \$17 billions in 1929 and increased 119 per cent to \$38 billions in 1948. Suburban and smaller town retailers meanwhile increased their sales 191 per cent from \$32 billions to \$92 billions. In other words, big city sales accounted for 35 per cent of total U. S. retail business in 1929, but for only 29 per cent of total sales in 1948.

Actually, it has been the growth of new businesses in other than big cities that has accounted for virtually all our increased number of new retail enterprises since the depression years. Only three major cities — Washington, Houston and Dallas — have consistently increased their number of stores throughout the two-decade period.





## INDUSTRIAL DEVELOPMENTS IN THE CHICAGO AREA

**D**URING August investments in industrial facilities in the Chicago industrial area totalled \$61,580,000, which brings the total investments for the first eight months of 1950 to \$251,046,000. Total investments during August, 1949, were \$6,819,000. These developments included expenditures for the construction of new plants, additions to existing industrial buildings, and the acquisition of land or buildings for industrial purposes.

Inland Steel Company will construct a new open hearth shop on land reclaimed from the lake. Orders have been placed for four new open hearths to be used in the new structure. Inland Steel has plans to bring its capacity within two years up to 4,500,000 tons annually from the present 3,750,000 tons.

Carnegie-Illinois Steel Corporation, operating the world's largest steel mills at Gary and South Chicago, has plans for increased steel production in the Chicago and Pittsburgh areas. It is expected that the major portion of the increase will take place in the Chicago area mills. Additional steel making and auxiliary equipment will be installed at both the Chicago plants as well as improvements to ore handling equipment and other modernization. In addition to the foregoing the company is rebuilding two of its coke oven batteries at the Gary Works. The Gary Works, in addition to being the largest steel mill in the world, is also the largest coke producing plant in the world.

Goss Printing Press Company, 535 S. Paulina street, has purchased a 20-acre tract of land at the intersection of Central avenue,

31st street and Ogden avenue in Cicero. Olsen and Urbain has been authorized to draw plans for a building which will occupy 300,000 to 400,000 square feet. The company manufactures rotary web printing presses.

International Harvester Company is constructing a 1,100,000 square foot plant on a 70 acre tract at 13th and 17th avenues in Broadview. The plant will be used as a parts depot and machine transfer plant.

Illinois Paint Works, 1034 S. Kostner avenue, will construct a one-story and basement building containing 54,000 square feet adjacent to its present plant. Illinois Paint Works is a subsidiary of Sears, Roebuck and Company.

Libby, McNeill and Libby will build a 53,000 square foot warehouse at Columbia and 165th street in Hammond.

Bastian-Blessing Company, 4201 W. Peterson avenue, is adding two one-story units to its plant. The new structures, which will provide 21,000 square feet of floor space, will house the production development and research engineering departments in addition to production area. Bastian-Blessing manufactures soda fountain equipment.

National Battery Company of Chicago Heights is adding 33,000 square feet of floor space to its plant.

Mississippi Valley Structural Steel Company, Melrose Park, will construct a 10,000 square foot detached office building.

H. C. Evans and Company, 1528 W. Adams street, has purchased a building at Carroll avenue and Justine street. The structure, which contains 92,000 square feet of floor



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area, will house the entire operations of the company. H. C. Evans and Company makes club room furniture, carnival supplies and coin operated amusement devices.

**Standard Transformer Corporation** has purchased the building it has occupied for some time at the corner of Addison street and Elston avenue in the Clearing Industrial District.

**Murnane Paper Company**, 153 W. Ohio street, has purchased 72,000 square feet of land at the corner of Kostner and Lemoyne on which a 40,000 square foot building is being constructed by W. H. Lyman Construction Company. Murnane Paper Company is a paper converter and distributor.

**National Aluminate Corporation**, 4001 W. 71st street, is expanding its plant for the housing of additional drying equipment. The company manufactures water treatment chemicals.

**Norwich Pharmacal Company** of Norwich, N. Y., is constructing a plant at 4110 Peterson Road for processing and storage purposes.

**American Spring and Wire Specialty Company**, 816 N. Spaulding avenue, is constructing an addition to its plant. The company produces springs, wire forms, and metal stampings. Everett F. Quinn and Associates, architects.

**Anchor Radio Corporation**, 2215 S. St. Louis avenue, will construct a one-story and basement addition to its plant. The company manufactures television boosters.

**Chicago Book Bindery Company**, 117 W. Harrison street, has purchased the two-story and basement building at 2100 W. Lake street. The building contains 33,000 square feet of floor area. Lang, Weise and Cella and J. J. Harrington and Company, brokers.

**Alex Janows and Company**, 865 N. Sangamon street, manufacturer of restaurant and cafeteria equipment, has purchased the building at 1442 W. Van Buren street. Lang, Weise and Cella, broker.

**Benjamin Electric Manufacturing Company**, Des Plaines, Ill., is constructing an addition to its plant. The company manufactures electric lighting fixtures and enameled products.

**Alloy-Crafts Company**, 4429 W. Cortland street, is constructing a 10,000 square foot addition to its manufacturing plant. The company manufactures stainless steel dairy, food and chemical processing equipment.

**George B. Carpenter and Company**, 440 N. Wells street, a firm organized 110 years ago in Chicago, has purchased the building at 401 N. Ogden avenue.

## Enemies From Within

(Continued from page 14)

system to be sure no wires are tapped.

8. Check the transportation systems moving in and out of the plant. Examine persons and loads upon entry to unloading docks.

9. Make thorough investigation of aliens in the plant.

10. Inform employees of the danger that lies within the confines of the plant in the persons of saboteurs. Instruct them to report information regarding possible subversive activities in the plant.

11. Work closely with military procurement agencies on security matters, especially if you have a classified contract, with the FBI otherwise.

12. Check your fire fighting equipment to see if it is adequate to meet your needs until city fire fighting facilities can reach you.

13. Where possible have an auxiliary power generator in case of temporary failure of city system. Provide for emergency illumination.

The cost to industry of such extraordinary protective measures will, of course, be considerable. However, costs of security measures were paid for by the government in war contract prices during the last war. Special protective costs were included as operating expenses on military contracts. In many cases, the Army also did the actual training of plant guards.

### Staggering Job!

In surveying their protective problems, many executives have been staggered by the size of the security and defense job that lies ahead. A top official of one company expresses it this way: "If Communists were alerted today they could cause untold damage overnight in our plants. No company is in a position to defend itself against this sort of thing."

This executive points out that during World War II, in the brief period when Hitler and Stalin were in alliance, his company had several cases of small sabotage in its plants: emery dust in gears, bolts in conveyor line mechanism, and the like.

One of the chief problems many companies have is to get rid of



"When I charge anything price is no object until the end of the month."



known Communist employees. Many of these workers have important positions in a union, making it difficult to fire them. Others go out of their way to be the most efficient, diligent workmen in the plant, to avoid grounds for dismissal. Dealing with this situation will be simplified if the Congress passes one of the Communist control bills currently pending.

Government officials consider the security and defense job of any future war to be far greater than in the last war for two obvious reasons: the dangerous army of Communists already organized in this country, and the destructive potential of an A-bomb or H-bomb attack.

Many security specialists believe, however, that the time to broaden plant protection plans is not after we become embroiled in global war, but now. As Chicago's plant protection chairman, Mr. Furbershaw, puts it, action is needed immediately.

He points out that procedures for detailed plant protection, including plans in case of bomb attack, cannot be effected on the spur of the moment. They involve planning, preparation, organization and training.

Many a businessman is loath to organize a semi-garrison state in his own plant or community, or to be "constantly looking under the bed for Communists," as one executive puts it. Others are realistically resigned to this semi-alerted condition, which has aptly been called the "new normalcy" of the 1950's.

## Here, There and Everywhere

(Continued from page 8)

on, in addition, has made it an offense for a motorist to pick up a humber. All motor carriers under jurisdiction of the Interstate Commerce Commission are prohibited from picking up hitchhikers anywhere.

**Highflown Weather Man**—Sometime this month New York city's skyline will have a new aerial addition in the form of a huge "weather star" atop the 25-story Mutual Life Building at Broadway and 55th street. The illuminated star will



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be 10 feet broad, weigh half a ton and contain 300 lamps that will show steady orange to forecast clear weather, steady green for cloudy, and flashing green for rain.

• **Musical Train Horn** — The Santa Fe Railway, which has been concerned about scattered complaints that Diesel engine horns are too harsh and startling, has equipped one of its streamliners with a newly designed set of horns which, it is hoped, will be more

pleasing to the ear. The new signal is a five-chime Nathan whistle which, when sounded, produces a musical chord or, according to the Santa Fe, a "chime effect." Tests thus far have shown the engine with the chime to be popular along the locomotive's Chicago to Los Angeles run.

• **Pretzels and Pie-Charts** — There is just a chance that as employees of ATF Incorporated are guzzling a couple of cold and foamy ones

on the front lawn with the neighbors some evening this Fall they may be inspired to launch into a discussion of corporate finances specifically of the corporate finances of ATF Incorporated. This possibility arises from the fact that ATF, which in the past has used phonograph records and jigsaw cut-outs to educate its employees on the economics of business, has now sent each worker a set of eight iced beverage coasters imprinted with a pie-chart breakdown of the company's income dollars. According to ATF President Thomas Roy Jones, it is merely a matter of "putting the economic story of business on a useful household article."

• **Polio Control?** — Two doctors, Erich Weis and Burton J. Winston of St. Therese Hospital in Waukegan, Illinois, have in guarded language expressed the belief that aureomycin, one of our so-called wonder drugs, may prove effective against infantile paralysis. Writing in the Illinois Medical Journal, they report that polio patients treated with the drug have had an average fever period of only 2.5 days against 4.8 days without aureomycin. One bulbar case, thus treated, showed a normal temperature and ability to swallow in 48 hours and recovered, as the doctors put it, "uneventfully." The doctors add, "There are 995 chances out of a thousand that the recovery rate in paralytic cases was improved by dosage of more than two grams of aureomycin per day."

• **Black Preferred** — The Automobile Manufacturers Association reports upon the basis of a nationwide survey that black is still the most popular motor car color among buyers. Green is in second place. Fast rising in popularity, however, is the two-tone car with one company reporting that 26 per cent of its total output is thus shaded. On an overall basis, the survey disclosed that two shades of green appear to be the most popular two-tone combination, closely followed by two shades of gray or blue. Bright colors still are most popular in the Far West, but black continues well out in front in New England and the Middle West.



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# TRANSPORTATION and TRAFFIC



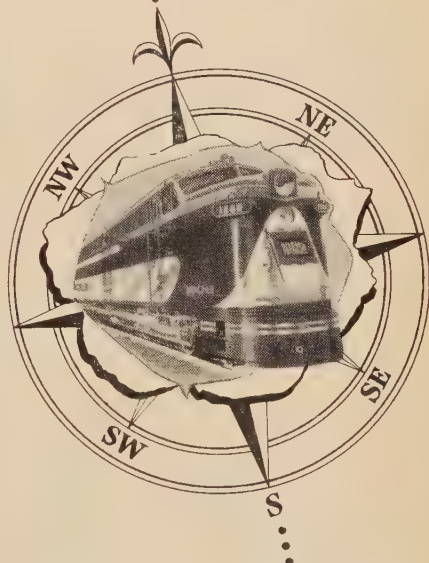
THE Interstate Commerce Commission has granted the request of the eastern railroads for permission to withdraw their petition in Docket No. 29770, Increased Less than Carload Rates in Official Territory, and for a discontinuance of the proceeding. The request was granted by the carriers subsequent to the commission's approving a substitute proposal increasing less carload rates on exception rated traffic approximately eight per cent, and restoring the flat minimum charge per shipment from \$1.43 to \$2.00. These increased rates and minimum charge became effective July 25, 1950. The Docket No. 29770 petition was filed by the railroads in May, 1947, and proposed an increased scale of less carload rates in Official Territory which, the carriers stated, was designed to meet the cost of handling less carload traffic. The commission denied the petition in its order released October 11, 1948. On June 13, 1949, the commission granted the railroads' request to reopen the proceeding for further hearing for the purpose of considering a proposed modified and alternative scale of less carload rates, a minimum charge based on 100 pounds at the first-class rate but not less than \$2.25, a minimum rate of \$1.00 when pick-up or delivery service is performed, and a minimum weight of 25 pounds per piece or package of freight. Before hearings in the reopened proceeding were held, the carriers submitted to the National Industrial Traffic League a substitute proposal for the establishment of the interim Docket No. 28300 scale of less rates on all less carload traffic in Official Territory and a minimum charge based on 100 pounds at the applicable rate, but not less than \$2.00. The league agreed to accept this substitute proposal with the understanding that if permitted

to become effective the railroads would withdraw their Docket No. 29770 petition. The withdrawal petition was filed shortly after the commission announced approval of the substitute proposal.

**House Passes Freight Forwarder Bill:** The House on August 9 by a voice vote passed H. R. 5967, the so-called freight forwarder bill. Earlier the same day the House, by a roll call vote of 146 to 232, defeated a motion to recommit the bill to the House Interstate and Foreign Commerce Committee. The proposed legislation would accord the status of common carriers to freight forwarders and would permit the forwarders to enter into contracts with carriers for transportation service providing that their contracts with the motor common carriers for truckload movements of 450 miles or more do not allow payment of charges lower than the lawful tariff rates. The measure now goes to the Senate for action.

**Saturday And Sunday Included In Computing Demurrage:** By Service Order No. 856, the Interstate Commerce Commission has ordered railroads to include Saturdays and Sundays in computing demurrage charges on all freight cars. The order became effective August 1, at 7:00 a.m., and is scheduled to expire at 7:00 a.m. on February 1, 1951. The order was issued to relieve the freight car shortage which the commission says creates an emergency requiring immediate action. The effect of the order will be to increase costs to the shippers and receivers when cars are held for loading or unloading beyond the free time period. For example, under the present rule a car placed for unloading at 10:00 a.m. on Wednesday would not accrue de-

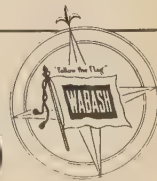
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murrage until 7:00 a.m. on Monday. Under the new order demurrage charges begin to accrue at 7:00 a.m. Saturday. Holidays are not included in the order and will continue on a free basis. The order applies on intrastate as well as interstate traffic and on cars held under the average agreement or any other regular settlement period.

**Southern Motor Carriers Adopt Rate Adjustment:** The Southern Motor Carriers Rate Conference has adopted a proposal to revise motor carrier rates applicable between points in Southern Territory and Southern, Eastern, Northern Middlewest, and Southwestern Ter-

ritories to reflect the increases granted the railroads in Ex Parte Nos. 166 and 168, taking into consideration the revision made in Docket No. 28300. No change will be made in rates established or revised to meet rail rates. W. M. Miller, General Manager of the Conference, stated that the action "was only taken after the matter had been thoroughly analyzed, giving consideration to not only competitive conditions, but other conditions which exist." Publication of the rate adjustment will be made to become effective as early as possible. The Standing Rate Committee of Central and Southern Motor Freight Tariff Association

met in Louisville, Ky., on August 16 to consider increasing all class and commodity rates applicable between Central and Southern Territories to be no lower than the current rail level.

**Time For Filing Statements in Docket 28300 Extended:** The Interstate Commerce Commission has extended the time for filing rebuttal or concurring testimony in Docket No. 28300, Class Rate Investigation, 1939, from August 1, 1950, to September 15, 1950. The railroads recently submitted a new scale of proposed class rates to be used in connection with the uniform freight classification. The scale of rates proposed by the eastern railroads is somewhat lower than the revised Appendix 10 Scale suggested by the commission last November for distances of less than 500 miles and higher for distances beyond 600 miles. The Southern carriers have proposed a scale of rates which for distances up to and including 600 miles is the same as the commission's revised Appendix 10 Scale, but which beyond 600 miles progresses at the rate of five cents for each mileage block. From 600 to 800 miles the mileage blocks consist of 20 mile units and beyond 800 miles of 25 mile units. The western railroads have submitted a so-called "basic scale" of rates for application within Zone 1 of Western Trunk Line Territory which is somewhat lower than the revised Appendix 10 Scale for distances up to 70 miles, but beyond which the rates are progressively higher. The proposed rates for the balance of Western Trunk Line Territory would be 15 per cent higher than the basic Zone 1 scale.

**Burlington Mills Not For-Hire Carrier:** Interstate Commerce Commission Examiner Walter D. McCloud has recommended that the commission affirm a prior report that the motor operations of Burlington Mills Corporation are not those of a common or contract carrier by motor vehicle as defined in the Interstate Commerce Act. Burlington Mills Corporation used its own motor vehicles in the distribution of its products. In a prior proceeding the commission found that Burlington Mills truck operations were performed incidental to

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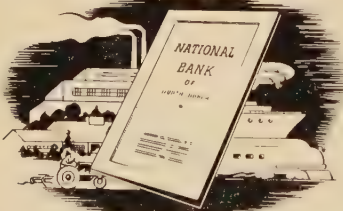
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and in furtherance of their primary business, and that they were not operating as either a common or contract carrier. The proceeding was reopened for further hearing on the request of Eastern railroads. The interstate Commerce Commission late last year, in reporting on further hearing in the Lenoir Chair Company and Schenley Disinfectors Corporation cases, held that primary business rather than compensation is the controlling factor in determining whether a carrier is engaged in for-hire or private transportation.

### Deny Request For Modification

**Of Stop-In-Transit Order:** The Interstate Commerce Commission has denied the petition filed last February by the Local Cartage National Conference requesting clarification or modification of the commission's findings and order in the Central Territory motor carrier stopping-in-transit cases. The conference's petition asked the commission to prescribe a maximum number of split deliveries at final destination and stops in transit for partial unloading at intermediate points, as well as reasonable and lawful minimum charges for such services. In a reply asking that the petition be denied, The Chicago Association of Commerce and Industry said that if the conference believes — "that there are certain rules and regulations which are unlawful, which may allow too many stops in transit, or which may provide for charges which they believe to be less than reasonably compensatory, the proper procedure would be to file a formal complaint alleging specifically the violation or violations involved rather than ask the commission to reopen the proceeding —" In its order in the stopping-in-transit cases the commission found that there was a commercial necessity for motor carriers providing two stops enroute between point of origin and final destination to either complete loading or partially unload truck-load shipments. They also found that there was a necessity for motor carriers providing an additional pick-up at point of origin and an additional delivery at point of final destination. These new rules

became effective in Central Territory on March 15, 1950.

### June Package Car Performance

Best Since August, 1942. The 76.7 per cent on-time performance of package cars departing from Chicago during June, 1950, was the best record for any month since August, 1942, according to records compiled by The Chicago Association of Commerce and Industry. Reports received by the Association on 17,992 of the 21,565 cars forwarded from this city during June indicate that 13,807 were placed for unloading on schedule. Of the cars late, 3,219, or 17.8 per cent, were one day late; 515, or 2.8 per cent, were two days late; 315, or 1.7 per cent, were three days late; 74, or 0.4 per cent, were four days late, and 62, or 0.3 per cent, were five or more days late. Bulletins showing the package car performance via all through routes from Chicago are published monthly by the C. A. C. I.

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# New Products

## "Lifetime" Faucet Filter

"Aqua-Mite" is the name given a new household faucet filter said to remove extraneous organic matter as well as objectionable tastes and odors from tap water. The filter fits most ordinary faucets with the help of an adapter, works with either hot or cold water, and utilizes layers of screen and the chemicals, hydrosorb and opalite, to remove rust, silt, algae and other sediment from water. The filter, which is said to require no replacements and to last "a lifetime," is produced by Del-Mar Services, Inc., 5823 N. Clark Street, Chicago 26.

## Coffee Stretcher

Restaurants and similar institutions using large vacuum coffee-makers can save up to 50 per cent on their coffee bill with a new device, called "Coffee Miser," which replaces the ordinary screen or plug type strainer in such types as coffee pots. This is the claim of the manufacturer, Javex of Glendora, California, which says the new extractor increases the saffool—or flavor—content of coffee as much as 40 times. The device holds 1½ ounces of coffee, enough to make 10 cups.

## Economical Lift Truck

Clark Equipment Company, Battle Creek, Mich., has introduced a remodeled gasoline fork-lift truck "Carloader" incorporating "Dynatork Drive," which, according to Clark, increases the truck's efficiency 20 per cent. The new drive transmits engine power to the wheels by magnetic induction through an air gap, thereby replacing a friction-type clutch. The conventional transmission is replaced by a constant-mesh gearing with the result that several sources of wear are eliminated, maintenance is reduced, and jerks and power wastes are avoided.

## Replacement Stopper

Lost the stopper for your picnic jug? It can be replaced with an adjustable stopper that, with a twist of the fingers, can be increased or decreased in size to fit

most jugs. The air-tight, leak-proof replacement stopper is made by Moeller Manufacturing Company, 2401 Durand Avenue, Racine, Wis.

## Round-The-World Clock

For those who want to know, the Kalex Corporation, 305 E. 46th Street, New York 17, offers a new clock that tells the time in 122 cities around the globe. The price is \$245.

## Easy Rug Dye

Household rugs as large as 9 x 12 feet can now be dyed right on the floor with a new concentrated liquid dye, according to the manufacturer, The Chair-Loc Company, Freeport, N. Y. The dye, called "Rugadub," is mixed with water and applied with an ordinary scrub brush on pile-type, woven or hooked rugs. It comes in billiard green, deep hedge green, tobacco brown, maroon and midnight blue and is said to dry to a smooth, even color overnight.

## Clogged Drain Blaster

Handling Devices Company, Inc., Boston, Mass., has developed a device called "Drain Gun" which with the help of carbon dioxide cartridges shoots a blast of gas and air to unclog household drains. When punctured, the cartridge builds up pressure inside the gun to 50 pounds, then the gun is placed over the drain and the air pressure released with a spring-operated valve to blow out the clogged wastes.

## Fold-Away Sawhorse

Ko-Lox Manufacturing Company, Menomonee Falls, Wis., has a new sawbuck that collapses into less space than required by a folded cot, yet when set up with two bolts and wing nuts, stands 25 inches high.

## Felt "Fountain Pen"

A felt-point pen closely resembling a fountain pen but which writes in black and colors on paper, wood, cartons, metal, glass, and cellophane has been introduced by Marsh Stencil Machine Company,



Belleville, Ill. Pressing down on the felt point automatically opens ball-shaped ink valve. Interchangeable points come in three sizes for fine, medium or broad lines.

#### Carburetor Gum Cleaner

Carburetor gum — a prime cause of slow starts, poor pickup and high gas consumption — can be removed without the necessity of pulling the carburetor with a new tool, called "Gumouter", and a solvent, "Gumout," which injects the cleaner directly into the carburetor. The cleaning job is said to take only 20 minutes and to reduce sharply the cost of such maintenance with the new equipment developed by Pennsylvania Refining Company, Cleveland 4, Ohio.

#### Accurate Heat Directors

"Louver Cone" and "Louver Fin" are the names given two new air diffusers by which heat can be efficiently and accurately directed from steam and hot water unit heaters in factories, warehouses, stores, garages, and similar buildings. By "fingertip adjustments" of the new diffusers, using no tools, heating engineers are said to be able to direct the flow of heated air in an almost infinite variety of patterns to produce comfort where needed. The manufacturer is the Trane Company, La Crosse, Wis.

#### Super-Sensitive Barometer

American Paulin System, 1847 S. Flower Street, Los Angeles 15, Calif., has introduced an aneroid barometer with etched graduations reading to 1/1000 inch of mercury and accurate to one graduation. The barometer has a range extending from 24.80 inches to 31.00 inches and is designed for ships, airports, weather stations, laboratories and similar uses.

#### Versatile Trimmer-Edger

A combination, electrically-powered lawn edger, hedge trimmer and weed cutting tool, called "Magic Wand," has been placed on the market by Apex Manufacturing Laboratories, South Pasadena, Calif. The light-weight (three pounds) tool is said to perform delicate, as well as heavy, trimming and cutting jobs around hedges,

lawns, trees, flower beds, curbing and bushes. It operates on 110 AC or DC voltage.

#### Magnetic Base Lamp

Adequate illumination for precision jobs can be provided with a new magnetic base, 40 watt bulb lamp, called "Handi-Lite," introduced by Enco Manufacturing Company, 4522 W. Fullerton Avenue, Chicago 39. A universal ball and socket and swivel arm allows the lamp to be focused in almost any angle.

#### Canine Memorial

A miniature doghouse in natural bronze, complete with polished name-plate, in which to keep Fido's remains after he has passed to dogdom's great beyond is the latest creation of Memorial Bronze Company, Ellenville, N. Y. The cremation urn, according to the company, "is the most healthful and respectable means of disposition of animal remains."

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stantly to within one degree tolerance. Five immersion lengths, five, eight, 10, 15, and 20 inches, are available in acid-resisting stainless steel.

## Chicago Mobilizes for Atom Defense

(Continued from page 16)

similar plans to restore transportation as quickly as possible after a bombing.

Main telephone cables running through Chicago are so deep that they might not be knocked out by an explosion. But if the bomb hit in the Loop, the central telephone exchange, which handles all calls going out of the city, would probably be destroyed. City water supplies would not be wholly cut off by a Loop explosion either. The south district filtration plant at 78th street would not be destroyed, and at least two cribs which are part of the North Shore's water supply would probably escape serious damage.

The main danger to public utili-

ties, unfortunately, is sabotage. Enemy agents may be prepared to swing into action the moment a bomb explodes.

Because of the extensive use that will be made of men and materials from all surrounding communities, Chicago's civil defense work is closely coordinated with the rest of Illinois and neighboring states. The primary cooperating area lies within a radius of 150 miles and includes parts of Indiana, Wisconsin and Michigan.

Although there is no such thing as complete preparedness for disaster, Chicago's volunteer defense group is making the city one of the best prepared in the nation against atomic attack.

## How Much Mobilization?

(Continued from page 19)

of headlines about controls, taxes, draft quotas, and the calling of reserves has tended to confuse our understanding of the term. Mobilization, says Noah Webster, is the "act of assembling, equipping, and preparing military and naval forces for active hostilities."

Since June 24, when the Communists poured south over the 38th parallel, our "assembling, equipping, and preparing" of military forces has taken many forms.

It began with invoking the draft and calling reserves to begin filling the economy-cut ranks of the army, navy, and air force to the limit of their authorized strength, some 2.3 million men.

Many confusing figures have appeared in connection with draft calls and summons to the reserve forces of the various armed services, but basically the initial decision to build up to full strength still stood at the end of seven weeks. This meant drawing some 600,000 men into the services, aside from mobilization of the national guard, of which four divisions and two regi-

mental combat teams had been called up, with more units facing the prospect of service later.

The draft — selective service — did not appear likely at this stage to have a major effect on industry. The quotas began taking unmarried men of 26 and working down to 19. Industry had more reason to prepare for the loss of its young executives who are members of reserve or guard units. The only national policy on deferments was that of the draft law regulations which provides for deferment of "any registrant whose employment in industry . . . is found to be necessary to the maintenance of the national health, safety, or interest."

Mobilization also brought hundreds of P-51 airplanes out of mothballs. There were modern jets on hand in Japan but the conventional fighters had a longer range and they were still adequate against the Russian-built fighters.

This was followed by the unwrapping of naval vessels, including carriers, and cargo ships needed for both fighting and supply. These



oves were all flexings of muscles practiced and ready but not used since the last war.

Then the government began putting to use its standby industrial potential, by such moves as the reactivation of synthetic rubber plants efficient to boost capacity 188,000 tons a year, and the increase of some 100,000 tons in aluminum producing capacity.

The \$17 billion in additional funds requested represents the new mobilization to come. A cool \$4 billion of it is earmarked to provide arms for western Europe, as part of the design for strengthening the whole western world. All except \$475 million, however, will be spent in this country and will be part of this nation's industrial task.

### Billions Since V-J Day?

The sudden imposition of this jump in military spending has made many wonder what happened to the billions we spent since V-J Day, supposedly to keep an adequate military force in being. A way of historical footnote it should be mentioned that in the four fiscal years from July 1, 1946, to June 30, 1950, we spent \$48.44 billions for strictly military purposes of our own, apart from foreign assistance. Out of every dollar, 41 cents went for military pay, food, and clothing; 26.4 cents for maintenance and operation of aircraft, ships, and installations; 17.6 cents for procurement of weapons, planes, and ships.

Even though the sum spent was unprecedented for peacetime, it was not enough. Two or three billion more a year would have lifted above mere maintenance of strength and enabled modest expansion and modernization. As a nation we found the defense part of the budget too tempting a field for economy.

Where is the new money going? For security reasons, the government is not announcing centrally just what it has set out to buy. The information would be of prime military value to the Communists. Enemy intelligence agents will have to pore over the contract announcements permitted by individual plants, add them up, and then try to figure out what kind of a story they tell. Orders have gone out, however,

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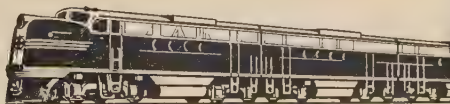
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for virtually all of the items a fighting force needs. Biggest block is that of the letters of intent to the aircraft industry, which total \$4.2 billions. Other orders call for tanks, trucks, trailers, military vehicles, combat weapons, ammunition, explosives, artillery carriages and mounts, recoil mechanisms — all the paraphernalia of war even to badges and medals and canvas for tenting.

These orders represent the new six per cent cut in civilian production which will affect some lines, like steel and automobiles, more than others. Taken together they will not be a strain on the economy comparable to the strain of World War II, but in many cases they will mean a tightening of supply that will leave a surplus of civilian demand and lead to inflation.

### Truman Behind Nation?

In the field of controls to cope with this problem, the administration's action has not been as well planned and resolute as in the areas, mentioned above, which come more strictly within the definition of "mobilization."

After his initial forthright and nationally-supported decision to meet Communist fighting forces

with fighting force — in effect call a halt to further sneak territorial grabs — President Truman seemed to lag behind the country as a whole, and behind Congress in facing up to the byproduct decisions.

### "Freeze" The Economy?

This was dramatized by Bernard Baruch when he testified before Congress in favor of strict freezing on all the elements of the economy at a time when the President was insisting he needed only the most limited of powers. As a result of general pressure, the administration announced it would accept full authority, but on a standby basis.

As this is written the final form of legislative action is still being debated in Congress. Consideration had progressed far enough, however, to indicate that by the time of publication Congress would have put the following action on the books:

**Taxes:** An increase of some \$1.5 billion a year in federal revenue including \$1.5 billion in higher corporation income taxes. The top corporate rate jumps from 30 to 45 per cent, effective as of July 1.

Excess profits tax legislation was





initely ruled out as an immediate consideration by the flat opposition of Senator Walter George, chairman of the Senate Finance Committee. It remains a high priority consideration by the next Congress if fighting is still going on.

The decision to hike regular corporate rates rather than to re-impose the wartime excess profits tax demonstrated a strong feeling in Congress that the Korean war has got to be much more of a pay-you-go war, in view of the size of the national debt, than was World War II, which was run on a 40 pay-60 borrow ratio.

**Production Controls:** Broad presidential standby authority with respect to priorities, allocations, rationing, wages, and prices.

Control legislation, however, is only the beginning of the job of handling production. The question of administration is equally important with that of policy. How will the President carry out his authority? Will he set up a host of new agencies to handle pieces of it? What new czars will crop up to manage industry for war? What will be the role of the National Securities Resources Board, which once thought of itself as an ever-ready, super WPB ready to take charge the instant shooting started?

#### Few New Agencies

There are differing views within the administration about these questions. Indications are that Mr. Truman will try first to operate through existing government departments rather than create new boards. He said as much at a press conference recently, specifically ruling out the possibility of a new WPA. Some of his most influential advisers do not believe the job can be superimposed on the regular departments satisfactorily, but every indication is that he intends to try that method first.

As for the NSRB and its new head, W. Stuart Symington, it promises to emerge as the top policy coordinator, and to some extent policy-maker, under a department-administered controls system.

In all the planning of mobilization, as to shape and size and de-

gree, it needs to be emphasized repeatedly that everything depends on a great unknown — the Soviet Union's intentions. A warlike move by another Soviet satellite, or hostile action by the U. S. S. R. itself, would make all current calculation obsolete overnight.

This knowledge was, of course, foremost in the minds of everyone immediately after the start of the Korean conflict. The conclusion was reached, hesitantly at first but of necessity, that it was not the start of World War III. That conclusion became stronger as time passed without additional outbreaks and with mounting evidence that Russia, having learned that she had overplayed her hand, was constrained to be militarily cautious.

No one is so foolish as to believe

that the U. S. is fighting only the little country of North Korea. What lies behind the minor enemy, however, is hard to gauge, even though there is a limit to what can pass as "civil war." Although presumably the supplying of munitions can go on indefinitely, the day will come when there aren't enough North Koreans or even Chinese that look like North Koreans. On that day we will learn whether mobilization takes a spurt upward or not.

Whatever happens, one of the lessons of Korea is that henceforth a military establishment of the kind that will give us adequate initial protection against the military threat of Communism is the kind that will cost us no less than \$25 billions a year.

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# Commerce Classified

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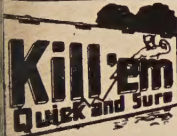
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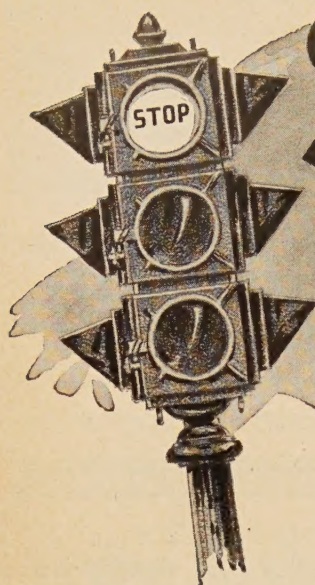
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# STOP ME-IF—

Mother was absent from the dinner-table; so Dorothy, aged seven, sat in her chair and pretended to take her place. Father was watching the child's solemn assumption of matronly airs with ill-concealed glee when her brother challenged her position with the remark: "So you're mother tonight? Well, if you're mother, tell me—how much is six times nine?"

Calmly and without hesitation, Dorothy retorted: "I'm busy; ask your father!"

\* \* \*

"Why did you leave your last job?"

"Illness."

"What sort of illness?"

"My boss said he got sick of me."

\* \* \*

In one of the large Los Angeles department stores a portly dowager, panting Pekingese under her arm, paused at the drinking fountain flanking the elevators. The elevator starter stopped clicking his castanets in amazement—the lady was giving her pet a drink.

"Madam," he said, "Please! the fountains are placed here for our patrons."

"Really?" she asked, putting down her dog. "I'm so sorry. I thought they were for the employees!"

Mrs. Tucker was boasting about the wholehearted devotion of her husband.

"I never worry about him paying attention to other women," she exulted; "he's crazy about me."

"That's wonderful, dear," rejoined her friend, Mrs. Arnold; "but aren't you afraid he has lucid intervals?"

\* \* \*

A couple of Scotsmen were walking along the road together and one was jingling something in his pocket. His pal asked "Jock, you must have plenty of money in there."

"Oh, no," said Jock, "that's my wife's false teeth...there's too much eating between meals in our house."

\* \* \*

A pink elephant, a green rat and a polka-dotted snake walked into a cocktail bar.

"You're a little early, boys," said the bartender. "He ain't here yet."

\* \* \*

"At her request you gave up drinking?"

"Yes."

"And you stopped smoking for the same reason?"

"I did."

"And it was for her that you gave up dancing, card parties and billiards?"

"Correct."

"Then why didn't you marry her?"

"Well, after all this reforming I decided I could do better."

\* \* \*

An insurance agent asked a cowboy if he had ever had any accidents.

"No," replied the cowboy, "none to speak of...a bronc kicked in a couple of my ribs and busted my collar bone and a rattlesnake bit me last year."

"Good gracious," said the agent, "don't you call those accidents?"

"No," said the cowpuncher, "they done it a-purpose."

\* \* \*

Teacher: "Johnny, what are the three great American parties?"

Johnny: "Democratic, Republican and cocktail."

The butcher was busy waiting on a customer when a woman rushed in and said, "Give me a pound of cat food quick!"

Turning to the other customer she said, "I hope you don't mind my getting waited on before you."

"Not if you're THAT hungry," the other woman replied.

\* \* \*

The man and woman entered a New York taxi and told the driver where they wanted to go. He raced off wildly, weaving careening down the streets, swaying bumping, and giving them several anxious moments. Noticing their concern, he shouted over his shoulder.

"Don't worry, folks, I ain't going to land in no hospital, especially after spending a year in one overseas."

"How dreadful," answered the lady sympathetically. "You certainly must have been seriously wounded."

"No," the cabbie replied cheerfully. "never got a scratch. I was a mental case."

\* \* \*

Jim: "Yep, the engagement is off. She won't marry me."

Joe: "Did you tell her about your rich uncle?"

Jim: "Yeah. Now she's my aunt."

\* \* \*

Little George's evening was ending up in the usual manner. His mother had ordered him to bed, he had demanded to know why he had to retire so early and she had told him. Following the usual pattern he had turned to his father.

"Pop," he complained, "women sure are unreasonable!"

Papa watched Mamma out of the corner of his eye, and timidly inquired:

"Why, son?"

"Well," explained the thoughtful youngster, "tonight Mom says, 'George, you are too young to stay up.' Know what she'll say in the morning, Pop? She'll say 'Get up, George—you're too big to stay in bed!' You can't win, Pop!"

